

The ROUNDDEL



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ROYAL CANADIAN AIR FORCE

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This Month's Cover



A C-119 of No. 435 Squadron of the R.C.A.F. flies past the summit of Vesuvius on its way Abu Suweir, Egypt, carrying troops for the United Nations force.

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BY FLYING OFFICER S. G. FRENCH

(In the course of his summer's work with the R.C.A.F. last year, Flying Officer French's duties took him over a large part of the territory covered by the Canadian section of the North-West Staging Route. The name of this once-famous airway, though no longer heard as often as it used to be, was familiar to all Canadian ferry and fighter pilots operating in the north-west of this continent during the Second World War. In the present series of articles, the author gives his impressions of the Route as it is today and relates his encounters with some of the people who were concerned with the making of it.—Editor.)

wilderness that lies between office and the Union Station?"
 "I am thinking," I said, ignoring his humour, "of lands far from here. I am thinking—"
 "Should you find yourself in extremis at any time during your travels, Sir, I can heartily recommend the cuisine at several of the

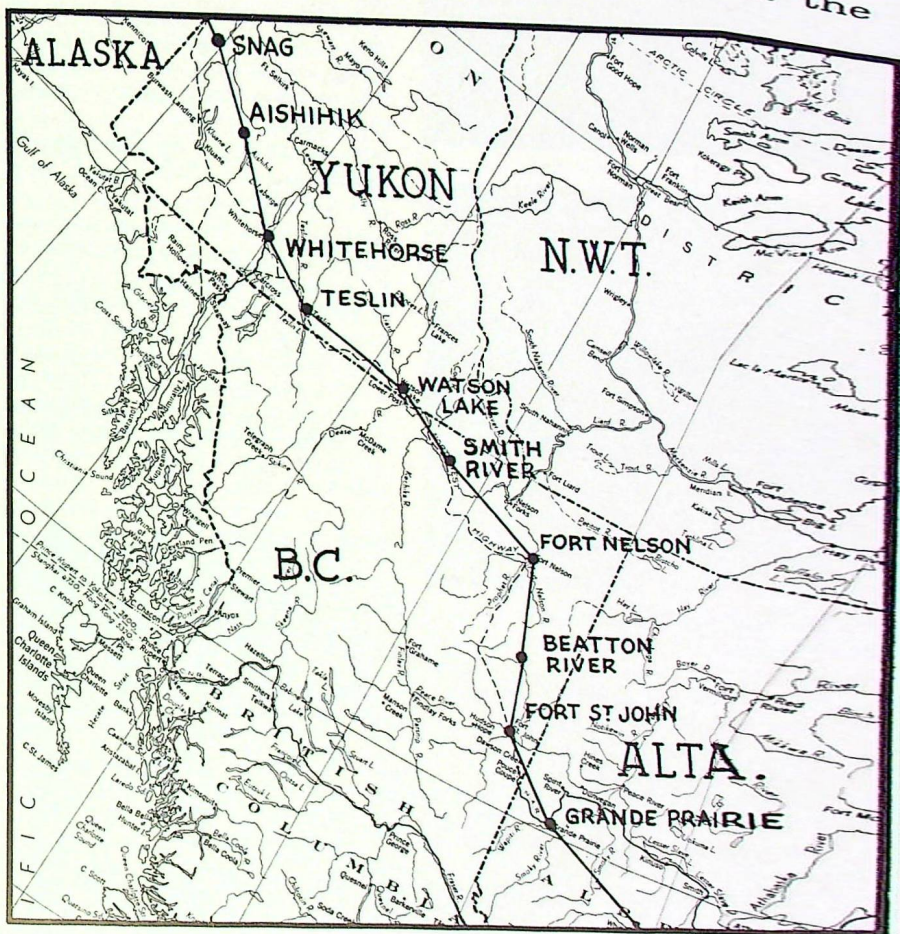
"The Northern Lights have seen
 queer sights,
 But the queerest they ever did
 see—"

"WHAT, Sir, is the meaning of all this?"

At the sound of that all-too-familiar voice, I stopped my chanting and looked up. Framed in the doorway of the editorial office of "The Roundel" stood Sgt. Shatterproof, staring with mingled astonishment and distaste at the assortment of articles I was attempting to stuff into a valise—geiger counter, cakes of pemmican, waterproof boxes of matches, collapsible rifle, axe, several pairs of Bishop's Jaegers, and other no less suggestive items of equipment.

"I go, Sergeant," I said sternly, "to the North. I go to recapture the spirit that fired the breasts of Robert Service and Jack London. Sloughing off the tinsel trappings of civilization, I go—"

"You go, Sir," he interposed, "to visit some of the units along the North-West Staging Route. I know. The editor told me. That is the reason for my question. Why the impedimenta?" He gestured at the litter surrounding me. "You feel that the transport might break down somewhere in the trackless





THE Roundel

Russian airmen at Fairbanks, the U. S. terminal of the Route, during the war. (National Film Board photo.)

Dakotas flying over the Route in 1943. (National Film Board photo.)

Russian P-39s (Airacobras) lined up at a Route base before take-off. (National Film Board photo.)



bear is one to conjure with in the North-West. Have you never heard of my uncle Six-Pan Shatterproof, the Titan of Telegraph Creek?"

I had not; but, needless to say, I very promptly did.

* * *

Safely aboard "The Canadian", with my gear deposited in a roomette, I set out on a tour of the train. The tour was prompted by necessity as much as curiosity, for roomettes were evidently not designed for the accommodation of 220-pound pioneers plus their gear.

As I passed through the last car on my way to the observation dome, I came upon a mobile pub. The discovery cheered me somewhat. By nice scheduling, it should be possible to divide my time agreeably enough between the dome, the preprandial, and the table. Next day, however, I found that I had been wrong in my calculations. For some sadistic reason, while the train is crossing the prairies and its passengers are most in need of cheer, the bar is closed. I was thus forced, when we crossed the Ontario-Manitoba border, to ease myself back into my roomette and to break the seal of an item that I had planned to use only in the direst emergency. But, as I gazed through the window at the unbroken horizon and the drab buildings which, at rare intervals, added to the starkness of the scene, I felt that few emergencies could be much more dire than this.

I whiled away part of that phase of the journey by studying the

literature I had brought with me on the subject of the North-West Staging Route. It was fascinating stuff, and the story it told began in the days when the old navigators first embarked on a quest that was to last for more than four hundred years — the quest for a short route to the fabled lands of Cathay and Zipangu, or, as we know them, China and Japan. I do not propose, though, to recapitulate it here. For the purpose of the narrative which follows, it is not necessary to take the reader farther into the past than the year 1935, when the civil aviation authorities were studying potential Great Circle air routes from the heart of North America, and Canada's position in relation to such routes. One such route was projected on paper from Chicago to the north-west through Alaska and Russia to Shanghai and China. It was also envisioned that such a route, in its initial stages, would give a direct connection from Central Canada to the Yukon which, up to this time, could only be reached by the Pacific Coast.

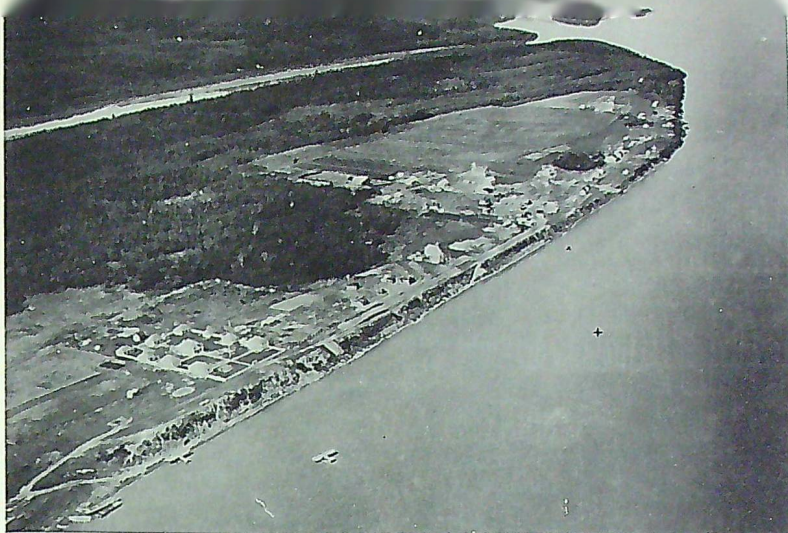
A survey of the paper projection was therefore made by A. D. McLean, then Superintendent of Airways in the Department of National Defence, in a Fairchild 71 aeroplane which was chartered from Canadian Airways and flown by C. H. (Punch) Dickens, one of the best known northern pilots of the day. Mr. McLean discovered that a practical route coincided almost precisely with the Great Circle projection and left no doubt that it was also the best route from the standpoint of weather and terrain, removed as it was from the effects of coastal precipitation and the deep snows in the coastal ranges. Further, it could be flown at an altitude not exceeding 4,000 ft. over its whole length. In fact, it lay entirely east of the main chain of the Rocky Mountains and only approached the Coastal Range at Whitehorse. A further check was

cafés which abound today north of the sixtieth parallel. 'Joe's Ritz-Waldorf,' for example, is justly famed for its *casseroles de poulet sans culotte*, while at "The Three Jolly Bulldozers" the *ragoût à la mitaine de mécanicien*—"

"You are acquainted with that part of the world, Shatterproof?"

He considered me thoughtfully for a few moments. Then:

"In person, Sir, no," he admitted. "But you will find that the name I



Fort Simpson, 1930.

made in 1936, with the object of deciding upon the best connection from the route to Vancouver, for it was realized that such a connection would undoubtedly be called for once an air mail service from Edmonton to the Yukon was finally established. Present-day service to the Orient departs from the Great Circle route in Alaska and goes via the Aleutians, an expedient dictated by political relationship with Russia.

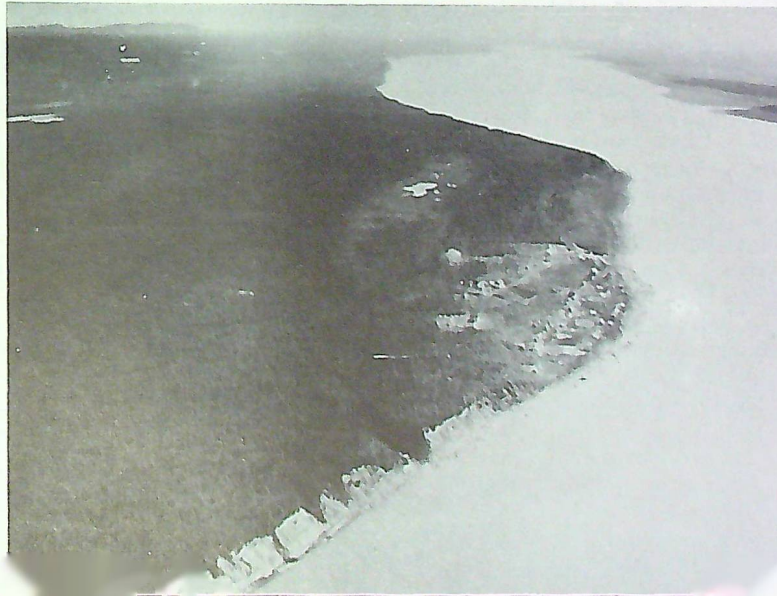
In 1937 a contract for a weekly air-mail service between Edmonton and Whitehorse was let to United Air Transport, whose name was subsequently changed to Yukon Southern Air Transport. This service, which operated via Fort St. John, Fort Nelson, and Watson Lake, was extended a year later to give a direct connection via Fort St. John to Prince George and Vancouver. The traffic soon justified an increase in frequency, until finally, in 1940, a daily service was authorized.

The experience gained in the continuous operation of the route confirmed fully the most optimistic expectations, and a decision was made to construct a modern airway as soon as funds could be obtained to build the necessary aerodromes and install the radio ranges and other aids to air navigation. The survey was under way when Canada entered the war in September 1939.

There was some question, at first, of withdrawing the parties from the field and setting them to work on the urgent task of locating and surveying the many aerodromes required for the British Commonwealth Air Training Plan, but it was decided to carry on and complete the survey of the North-West Airway (as it was then known). It was realized that, should the United States be drawn into the war, the Airway would immediately become of the highest strategic importance, as affording direct access from that country to Alaska.

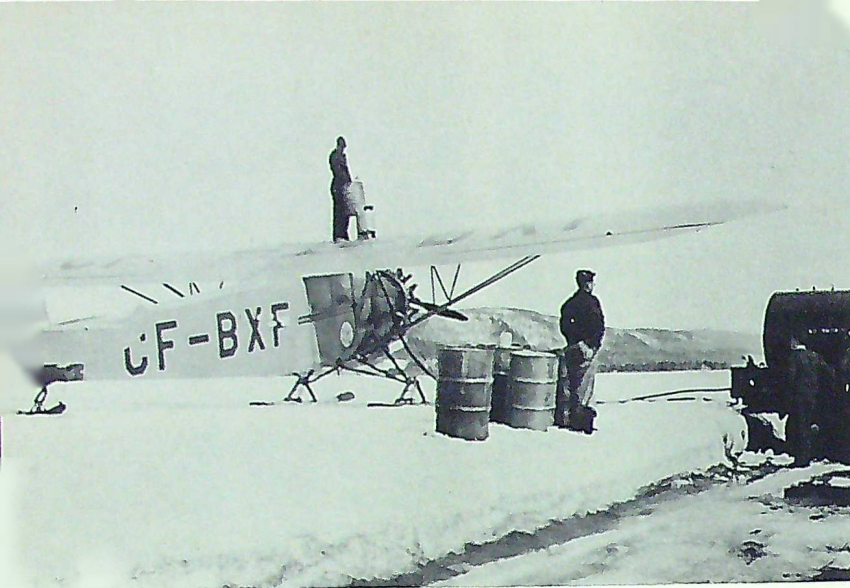
On 18 December 1940, funds were released for the project, orders were placed for the necessary equipment, and contracts let for the execution of the work. Six weeks later, the actual work began when the huge

Fort Norman, 1930.



diesel-driven trail-builder pulled out of Dawson Creek on its journey of three hundred miles to Fort Nelson. Space does not permit of a detailed description of the amazing feats of construction that followed. It must be enough here to say that, by the end of the year, radio ranges were in operation, and, when the Americans entered the war, Canada was able officially to offer them the use of an airway with good airports and radio ranges at 200-mile intervals all the way from Edmonton to the Alaskan boundary.

Throughout the war the North-West Staging Route was the responsibility of the R.C.A.F.'s North-West Air Command. Every one of its stations was the scene of intense activity for twenty-four hours a day. Fighters, bomber, and transports came and went ceaselessly, some of them on ferry flights to Russia, some of them to meet the ever-present threat to the west coast from Japan. Nor, when eventually peace returned and the aircraft went home from Alaska and the Aleutians, did the Route cease to be of major value either to Canada or its war-time ally. Aircraft still drone their way over it, night and day, on scheduled flights that have ended for ever the isolation of the North-West.



Fairchild at Watson Lake, 1941.

Seven of the ten aerodromes along the Route are operated by the Department of Transport and three by the R.C.A.F. At Edmonton, the starting-point, there is both a large R.C.A.F. base and a big civil airport. The Alaskan section of the Route, which is less than one fifth as long as the Canadian, is, of course, operated by the U.S. authorities.

* * *

The first thing I did on my arrival in Calgary was to 'phone two old-timers who had been associated with the Staging Route in its early days and who now worked with C.P.A. Since the line seemed to be remarkably busy, and since, each time I hung up the receiver, my nickel failed to return, I soon ran out of small change. Just then a man from the telephone company came along. He opened the box, pulled a piece of toilet-paper out of the coin-return slot, and down showered a stream of coins. This, he told me, was the manner in which many people supplemented their old age pensions.

Finding that both my men had been transferred to Vancouver, I went into an attractive little cellar-restaurant for a meal. During the course of it, I asked a pretty blonde who was sitting beside me what a stranger in the city might do while waiting for a train connection. She expressed a polite regret that I was

not staying longer, and suggested that I might visit the zoo at St. George's Park. I therefore spent my brief stay in Calgary in letting the gibbons watch me in my cage.

The trainman of "The Dayliner", which took me on to Edmonton, cornered me on the platform at the rear of the train to tell me about the troubles he was having with his psychiatrist, and I had barely had a chance to locate my seat before we were in Edmonton. There I took a taxi to a well-known hotel where a bell-boy seized my bags and led me to the desk. My enquiry as to the price of a single room elicited a figure which was exactly the amount paid to me by the government for one day without rations and quarters. As I picked up my bags and walked out of the hotel lobby, the silence of the spectators was oppressive. Prosperity, I perceived, had indeed hit the Albertan capital.

On the following morning I went to Tactical Air Command Headquarters to report to Group Captain H. G. Richards, O.B.E., the Air Officer Commanding, who briefed me thoroughly on what I needed to know before starting on my trip.

The maintenance of the North-West Staging Route, he told me, is essential for military and civil traffic, and for the defence of North America. It is possible that, of the

six units now operated by the R.C.A.F., two more will be passed over to the Department of Transport before very long. At the present time the responsibility for the various units is allocated as follows:

Edmonton	Army and civil airports)
Grande Prairie (D.O.T.)	
Fort St. John (D.O.T.)	
Beaton River (D.O.T.)	
Fort Nelson (R.C.A.F.)	
Smith River (R.C.A.F.)	
Watson Lake (R.C.A.F.)	
Teslin (D.O.T.)	
Whitehorse (R.C.A.F.)	
Aishihik (D.O.T.)	
Snag (D.O.T.)	

Watson Lake, I gathered, is retained by the R.C.A.F. because it is used for summer camps and as a base for advanced air exercises—"and it's a damned good fishing-area, too!"

I had to spend three days in Edmonton before I could board the "sked-run" for Whitehorse, and I employed much of the time in visiting various libraries and in talking with several people who had had some connection with the Route. There is something about Edmonton that catches the imagination of anyone who is even remotely concerned with the history of Canadian pioneer flying. The city was the chief centre of early northern aviation, and many were the once-famous bush pilots who trod its streets—"Con" Farrell, "Wop" May, "Punch" Dickins, E. G. Fullerton, Leigh Brinell, Walter Gilbert, George Gorman, Andy Cruickshank, D. R. McLaren, Pat Burke, Grant McConachie, and numerous others. Such men as these it was who helped to make Canada, in the mid-thirties, the largest carrier of air freight of any nation in the world. (Russia, by the way, took over the lead some two or three years before the war.) Much of that freight was carried into—and out of—the far north-west, a region devoid of other means of transport.

On Saturday evening I found myself tired of reading and talking, and I decided to blaze a quiet little

trail of my own. Thus, I eventually found myself in one of Edmonton's less "sophisticated" taverns, seated at a table at one end of the rather dingy room. Beside me was a jovial and sanguine old man, who now and then tilted his kitchen-chair precariously against the wall. Presently, after eyeing me for a few moments, he said,

"Good day to you, my friend."

I replied that it was.

"Are you a stranger in town?" he went on after a brief silence.

"Virtually."

"What is your business?"

Seeing no reason to conceal it, I told him. His eyes sparkled even more brightly than before.

"I'm Wop May's Uncle," he said.

I too tilted my chair back, and we sat for a time side by side against the wall, exchanging the odd pleasantries. Then my friend, who, like myself, had by this time broached another bottle, settled back and began to speak of bygone days.

"Well, friend, just after *the* war, Wop got a job with a travelling circus while it was in Edmonton. He was to fly over the city distributing hand-bills. So one day he said to me: 'Uncle Tom, how'd you like to come up with me?' Well, we went out to the circus grounds and Wop tied me into her real tight. She was called the 'City of Edmonton'.

"We went up and flew all over the city, with me throwing out those papers. In between throws I sat there out in the open air looking with a little misgiving at those two flimsy wings. When all of the advertisements had been circulated, so to speak, I tapped Wop on the shoulder. This was what he'd been waiting for. Up we zoomed, and he did all kinds of tricks — loops, figure-eights, the whole works. Then, all of a sudden, we started to dive. Down and down we went, faster and faster. Then, quick as anything, we levelled off and flew right under the High-Level Bridge which straddles the Saskatchewan

River right in the heart of Edmonton. When we returned to the circus field we were met by the mayor, the councillors, and several policemen. Did they lay into Wop!"

A few years before the incident related to me by Uncle Tom, Wop, together with Roy Brown, another Canadian in the R.A.F., had been involved in an episode which had caused not only his fellow townsmen, but most of the world, to cheer. Having destroyed a German aircraft in a dog-fight over Germany, he was returning to base in his *Camel* with his guns jammed. Suddenly he was attacked by the famous Baron Manfred von Richthofen in his scarlet Fokker. The Red Knight of Germany had left his circus of *Albatross* scouts and Fokker triplanes, to pursue the lonely *Camel*. Just as it looked as if Wop was going to be hit by Richthofen's deadly fire, Roy Brown appeared on the latter's tail and shot him through the heart.

Wop was soon forgiven for his exploit under the High-Level Bridge. In 1920, the Imperial Oil Co. bought two Junkers aircraft in New York for use in connection with its new development about fifty miles down river from Fort Norman. May and George Gorman went to pick them up, and on their arrival in Edmonton they were accorded a civic welcome.

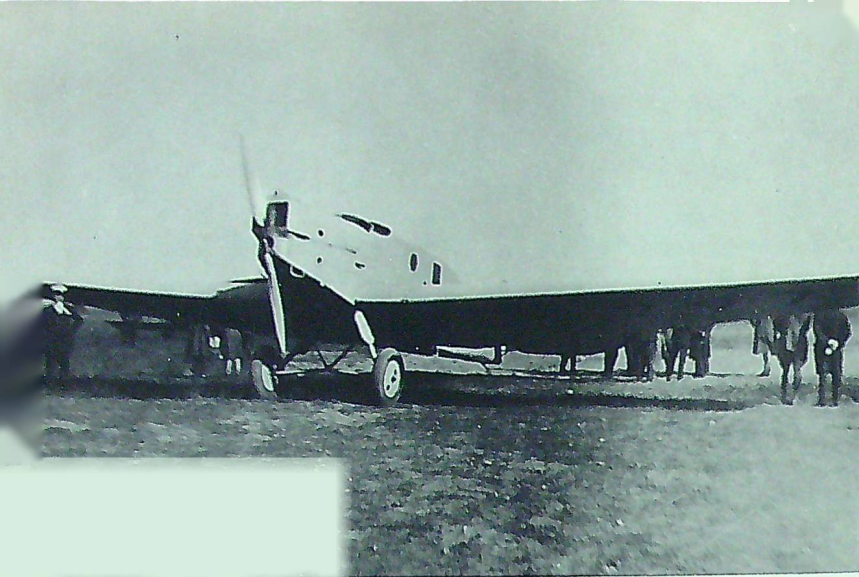
May then left the job, and Imperial Oil hired another young bush-pilot, named Fullerton*; and he and Gorman took off for Fort Norman. When, after several stops to refuel, they landed on the snow at Fort Simpson, 250 miles from their destination, Gorman's 'plane sank into the soft snow and smashed its propeller and one ski. Then followed one of those fascinating episodes in which the history of the north country abounds. Although it has little direct bearing on the North-West Staging Route,

*Group Captain E. G. Fullerton, A.F.C. (retired).

a brief account of it seems well worth giving here.

They were told that the ice on a small subsidiary channel (or *snye*) of the Mackenzie, about a mile away, would provide a better landing field than the one chosen. The undamaged aircraft (the *Vic*, as it was named) was flown out of the field to the *snye*, where it could be refuelled for the final hop to Norman Wells. During the flight the *Vic* developed a pre-ignition knock as a result of using low-grade gasoline. The obvious remedy, an overhaul, would have meant further delay. Since the engine of the other aircraft (the *Rene*) had run fewer hours than that of the *Vic*, and as the aircraft required only a prop and ski to make it serviceable, it was decided to lend the *Rene* the prop and one ski from the *Vic*. The changeover made, the *Rene* took off. Unfortunately, it stalled and crashed, suffering a broken prop, damaged wing, and wrecked undercarriage. The borrowed ski, however, was undamaged; so it was returned to the *Vic*, thus leaving that aircraft minus only a propeller. But the word "only", at Fort Simpson, had somewhat drastic implications: it would take five months to obtain a replacement. After some discussion, therefore, Bill Hill, the mechanic, set about making a propeller out of some oak sled-boards, moose-hide glue, and large clamps from the Catholic Mission. He was ably assisted in his incredible undertaking by a local carpenter named Johnson, who had been a cabinet-maker in England. The propeller was completed in a month, and, to the amazement of everyone but Hill and Johnson, it functioned perfectly on its test flight.

The end of April was approaching, and, with the break-up so close, it would have been sheer folly to attempt to continue the flight to Fort Norman. Accordingly, preparations were made for the return



Junkers 6-place cabin monoplane.

trip to Peace River. The members of the party were all peacefully sleeping when, at 5 a.m., an Eskimo awoke them with the news that the ice on the Mackenzie was breaking up. With the ominous rumbling of breaking ice spurring them on, they hurried out to the *Vic*. When they reached it, smooth solid ice stretched before the aircraft for 400 yards, but, by the time the engine was started, its extent had dwindled to 200. Beyond were only innumerable floating ice-cakes. None the less, a successful though nerve-racking take-off was made, and the *Vic* headed for a small nameless lake some five miles distant. After landing, the pilot trekked back to Fort Simpson through deep snow to bring out the rest of the party and the equipment; and finally they pitched camp for the night beside the aircraft.

Next morning, leaving one man to stay with the *Rene*, they took off with full tanks. As they went further south, however, the snow beneath them became less and less, until at least none at all was visible. Landing on skis thus posed something of a problem, and, as they approached Peace River, they decided to try a landing on Little Bear Lake, about 15 miles north-west of the settlement. Since the ice on the lake was blackish and ducks were swimming all around its edges, the prospect was not an inviting

one, but they had no alternative. First, however, they circled the Peace River landing-field in order to drop a note to the cook-caretaker requesting that wheels and gasoline be brought out to Little Bear Lake—and, much to their surprise, they saw a Junkers parked on the runway. Then, returning to the lake, they made a landing without mishap.

While awaiting the arrival of the wheels and gasoline, they drained their tanks in order to ascertain how much fuel was left, and they were considerably shaken to find not more than half a gallon. A few minutes later the Junkers which they had noticed earlier landed beside them. Its pilot was the New York agent from whom Imperial Oil had purchased the *Vic* and the *Rene*. With him were the requested fuel and wheels. Having heard that they were due back almost any day, he had been waiting for them at Peace River and happened to be in the hangar when they dropped their note.

* * *

I arose at 4.30 on Monday morning and took a taxi out to Namao to catch the "sked" at 7.00 o'clock. Several other human shapes were sitting around the waiting-room, wondering — as I too wondered — why on earth we had been told to be there at 5.45. Presently the parachutes were wheeled in. I, being

rather tall, always have to spend some time opening the straps of a parachute harness to their full extent. On the present occasion, just as I had succeeded in adjusting them so that they fitted me if I stood in a semi-circular posture, a loud speaker bellowed: "The sked run to Whitehorse has been postponed until 1100 hours."

The other sheep and I removed our harnesses and set out in various directions. I decided to go over to the officers' mess and snooze in the lounge. On arrival there, I found the cushions still turned up in the chairs: even the staff had not yet appeared. I therefore made my way downstairs and played billiards with myself. Since I was not even yet feeling quite up to par, we both lost.

After breakfast and a brief nap, I returned to the waiting-room, adjusted another harness, put it on, and was advised by the loud speaker that the flight had now been cancelled and would I "Please report here at 0545 hours tomorrow."

For the next nineteen hours I found relief from boredom in learning what I could about R.C.A.F. Station Namao. It seems that, during the war, the Edmonton Airport speedily became a very important junction for air traffic. Trans-Canada Air Lines, Pan-American Air Lines, the R.C.A.F., and the U.S. Air Transport Command, were all using it. The congestion became too great for efficient control of traffic, and eventually it would have led to a tie-up which might have impeded the flow of aircraft to Russia and the Aleutians.

The U.S. Army Air Force therefore made arrangements with the Canadian Government to construct an aerodrome at Namao, eight miles north of Edmonton. With planning and supervision under the direction of the Department of Transport, work began in August 1943 and was completed early in November 1944. Approximately

2,500 acres of land were expropriated by the Canadian Government for the site. To transport building material and, later, aviation gasoline, coal, and heavy supplies, a spur line five miles long was built, connecting the Northern Alberta Railway with Namao. At a cost of

\$7,000,000, which was repaid to the United States after the war by the Canadian Government, a modern aerodrome was constructed, to which the R.C.A.F. has, in recent years, added many new buildings, including messes, permanent married quarters, and an immense com-

munity recreation centre.

It was in a duly impressed frame of mind that, having adjusted a third harness, I finally boarded the C-119 *Packet* early the following morning.

(To be continued)



B FOR MUTTON

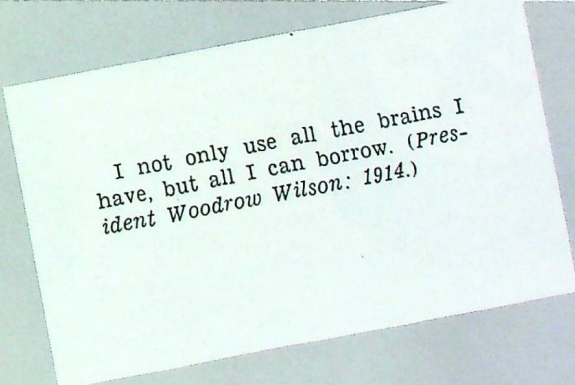
Nowadays, when a voice over a Service line or radio telephone makes the romantic-sounding statement, "November Tango Romeo," it means, unexcitingly in fact, only N.T.R. — Nothing to Report. In the last war, and until a short time ago, the voice (meaning the same thing) would have said Nan Tare Roger, and before 1942 would have said Nuts Toc Robert. Thus, drastically, have "they" changed yet again the Signals phonetic alphabet designed to prevent confusion between letters when named singly. This time, it is understood, it has been with an eye, or rather, an ear, to the matter of the comprehension of the many-tongued men of the forces of the November Alpha Tango Oscar countries.

Certainly things to-day in this branch of Service verbal communication are a lot less simple than the Ack Beer Charlie of the signalers of the First World War, or even the Able Baker Charlie of the Second. Though, to be sure, Charlie still goes on. It is still he who follows the Alpha Bravo of the latest phonetic alphabet, and X-ray too appears to be as steady and constant as might be expected, while Victor, who once was "matily" just

Vic, at least is staying as he was during the last war. But it is disturbing to see that William has taken to Whisky, and sad that Peter, the pleasant though on the whole less effective successor to the strong, unmistakable Pip of long ago, now gives place to a most feeble Papa. Time-honoured Sugar is somewhat inadequately succeeded by Sierra, and good old George, after all these years, is going in for Golf.

Yet there is one Army Signals unit, once of yeomanry, now of parachutists, who doubtless will stick to using, among themselves, their own peculiar phonetic alphabet evolved in the Western Desert by

the squadron which served with the 22nd Armoured Brigade. This began bluntly with A for 'Orses (hay for horses), B for Mutton (beef or mutton), C for Thighlanders (Seaforth Highlanders), and went on in an ascending scale of the higher lunacy to verbal atrocities like M for Sis (emphasis), R for Askey (Arthur Askey), and X for Breakfast (eggs for breakfasts). But even by those unorthodox practitioners the receipt of a message was strictly acknowledged, as messages still are acknowledged (in spite of Romeo), by the regulation formula, Roger (meaning R or "received")! —Out! (*"The Times Weekly Review"*: U.K.)



I not only use all the brains I have, but all I can borrow. (President Woodrow Wilson: 1914.)

BADGES OF THE R.C.A.F.

In this issue we begin publication of a series showing the badges of the R.C.A.F. The dates beneath the name of the unit are those on which the badge was approved by the Clarenceux King of Arms. Following it is the heraldic description of the badge, and then the motto. Black-and-white reproductions of the badges may be obtained by writing to: Director of Public Relations, Air Force Headquarters, Ottawa, Ont. Glossy or matt prints are available in two sizes: 8" x 10" (50c.) and 11" x 14" (\$1.00). Cheques or money orders must be made payable to the Receiver General of Canada.

ROYAL CANADIAN AIR FORCE GENERAL BADGE

(January 1943)

In front of a circle inscribed with the motto *Per Ardua ad Astra* and ensigned with St. Edward's Crown, an Eagle volant affronté, the head to the sinister. Beneath the whole, upon a scroll, the words:

Royal Canadian Air Force

NO. 445 SQUADRON

(April 1956)

A wolverine rampant, coloured proper, holding in its dexter paw a blue lightning-flash.

Strike as Lightning

The wolverine is an ingenious and fearless animal of great strength for its comparatively small size. It



NO. 3055 TECHNICAL TRAINING UNIT (AUXILIARY)

(March 1956)

A lamp held by a hand.

Non Omnis Moriar
(I shall not entirely perish)

The lamp is symbolic of the unit's function of imparting knowledge. The motto, taken from the Odes of Horace, implies that, although the trainees leave the unit on graduation, the technical skills which they have acquired are a permanent contribution to the Service and therefore the Training Unit never wholly dies.

Formed at Vancouver on 15 October 1950, the Unit provides technical training in numerous trades for Auxiliary and Primary Reserve groundcrew personnel.



hunts by day and night, and in all weathers. The lightning-flash suggests the speed with which modern aircraft strike.

No. 445 (All-weather Fighter) Squadron was formed at North Bay, Ont., on 1 April 1953 and relocated at Uplands, Ont., five months later. At the beginning of November 1956 the squadron flew overseas to join No. 1 Fighter Wing at Marville, France, as the first CF-100 unit in the R.C.A.F.'s No. 1 Air Division. The squadron number is the second new number created in the R.C.A.F. since the end of the Second World War.



"SOLVED BY WALKING"

"*Solvitur Ambulando*", translated as "It is solved by walking", is the motto of one of the most exclusive clubs in the world, the R.A.F. Escaping Society.

Although membership in this unique organization is considered an honour, there is no waiting list. No one can join who is not already eligible, for membership is limited to past or present members of the Commonwealth or Allied Air Forces who, while serving with the R.A.F. during the Second World War, either escaped from captivity or evaded capture.

Founded in 1945 by Marshal of the R.A.F. Lord Portal, K.G., G.C.B., O.M., D.S.O., M.C., the society now numbers some 500 members, drawn from seven nationalities. The Society was formed with the specific aim of giving financial and other assistance to those gallant people, known to the Society as "Helpers", who aided fliers to escape. Aid is also given to Helpers' widows and orphans. A further aim is to cement the ties of friendship formed between Escapers and Helpers.

Steps were taken to realize the aims of the organization right from its inception, and during the eleven years of its existence countless problems have been handled with quiet efficiency. Grants of money have been given to needy and deserving Helpers, various governments have been petitioned to raise pensions for disabled Helpers left destitute by the war, jobs have been provided, and better accommodation arranged for.

One of the Society's most successful projects, and the one which probably does most to promote good will between the Commonwealth and France, Belgium, and Holland, is the Children's Holiday Scheme, which brings children from European countries to the U.K. for free holidays. On these occasions the



children are entertained by members of the Society, members of the R.A.F., the R.A.F. Association, and friends of the Society. In addition to the organized holiday scheme, many independent visits are made each year by children of the Helpers to members of the Society. Such visits have turned out to be a two-way affair: in 1955, for instance, a group of British children was flown to France by the French Air Force at the request of numerous families, many of whom had had an opportunity in previous years of sending their own children to England and who were anxious to repay the hospitality. The Helpers themselves have not been forgotten, and since the end of hostilities the Escaping Society has brought more than 250 of them from the

continent to visit airmen in England whom they sheltered during the war. Starting in 1952, the society has arranged for the education of one French or Belgian boy per year to Cliftonville, a school in England; and a home is provided for the student during the holidays.

The R.A.F. Escaping Society finances its many charities by direct appeals to firms and individuals and by proceeds from film *premières* and book sales. It also receives dividends from the sale of Paul Brickhill's book, "Escape or Die". Other sources of revenue are the sale of raffle tickets, collection boxes on all R.A.F. Stations, and donations from society members.

The R.A.F. Escaping Society has done, and is continuing to do, much good work for the benefit of those who helped Allied fliers in their time of need. It now has a branch in Australia; and, in view of the fact that many Canadians are eligible for membership, it is hoped that a similar branch will be formed in Canada.

Anyone interested in exploring the possibilities of starting a Canadian branch can obtain all the necessary information from:

Squadron Leader W. S. O. Randle,
Ministry of Defence,
Storey's Gate,
London, S. W. 1,
England.

Views expressed in "The Roundel" upon controversial subjects are the views of the writers expressing them. They do not necessarily reflect the official opinions of the Royal Canadian Air Force.

DETERMINED ON DELIVERY



On the runway at Capodichino, Vesuvius is seen in the background.

BY SQUADRON LEADER J. A. CONNOLLY,
Deputy Director of Public Relations.

IN Toronto it was five in the afternoon of November 24th, and Edmontonians across Canada were whooping it up in celebration of the Eskimos' Grey Cup victory of an hour or so earlier. The glad tidings, however, had not yet reached the Italian city of Naples, so that the small group of aircrew who were being carried in a bus through its streets out to the military airport at Capodichino were still speculating on the probable outcome of the game. Since all of them were members of No. 435 (Transport) Squadron, based at Namao, all of them were staunch Eskie supporters.

The first element of the squadron had landed at Capodichino in the small hours of the same day, and the airlift of troops and supplies for the U. N. Emergency Force in the Middle East was now under way.

* * *

Shortly after 2.00 a.m. two C-119s roared down the runway and set course for Souda Bay, an airport on the island of Crete. There they were refuelled while the crews had breakfast, and before long they were off on the second and last leg of their flight to Abu Suweir, an

airfield about five miles west of Ismailia and 45 miles east-northeast of Cairo. At Abu Suweir, where they arrived three and a half hours later, U. N. officials met the aircraft, and within minutes the cargo of rations, trailers, and a jeep, was being unloaded. During the next hour the crews checked the weather for their return trip and filed flight plans with the Egyptian authorities, then took off on their non-stop flight back to Capodichino. From the time they had left their hotel rooms in Naples to the time they were once more comfortably installed in them, not quite 24 hours had elapsed.

At the end of the third week the crews began their present practice of taking off from Italy before noon, flying to Souda Bay and remaining there overnight. They leave Souda early in the morning, deposit their loads at Abu Suweir, and then head back to Capodichino. By this means the crews are able to get a good night's sleep and do most if not all of their flying during daylight hours.

In the first three weeks of operations, No. 435 (Chinthe) Squadron rolled up an impressive score. More

than 1600 troops (including Canadian Army personnel) and nearly 225,000 lbs. of freight, 115,000 lbs. of baggage, and 2,000 lbs. of mail were airlifted from Italy to Egypt in more than 900 flying hours.

Such an achievement would have been impossible but for the part played by the groundcrew. Working round the clock in three shifts, the airframe, aero-engine, telecommunications, electrical and instrument technicians kept the C-119s in tip-top shape for the 2500-mile round flight between Capodichino and Abu Suweir. In addition, a repair shift of some 60 technicians worked from 8.00 a.m. to 5.00 p.m., carrying out major repairs to the aircraft.

Nor did the repair and servicing personnel operate without problems. Improvisation was often necessary. Engine-stands were not available when operations began; voltage in the Capodichino hangar is 160, and R.C.A.F. equipment operates on 110-220; and apparatus for cleaning engine-filters was lacking. But No. 435's groundcrew took all this in their stride. Temporary engine-stands were built from lumber supplied by the Italian Air Force; R.C.A.F. ground electrical equipment was pressed into service until transformers could be procured and installed; and the engine-



Canadian soldiers, wearing the light blue U.N. helmets, embarking at Capodichino.



Left to right: Corporal N. Kranz, Sergeant P. Gagné, Leading Aircraftman J. Spencer, and Cpl. Scally.

filters were cleaned by connecting an airline from a ground compressor to a pail of varsol. Transportation — another headache — was overcome by hiring commercial buses until a nine-vehicle convoy arrived from No. 1 Air Division, at Metz, France.

While the aircraft are flown from and serviced at Capodichino, all personnel live in a very modest hotel in the older section of downtown Naples. Here too is situated the headquarters of the Air Force contingent. Five of the six floors in the hotel have been taken over by the R.C.A.F.; and the commander and his administrative staff, including medical, spiritual, and accounting personnel, have offices on the second floor. Also on the second floor is the airmen's dining-room. At first, officers and airmen used to eat in the hotel dining-room or in cafés and restaurants in the city, but within two weeks a kitchen was set up for the airmen and they are now able to sit down to typical Canadian meals.

The remainder of this floor, as well as the third, fourth, fifth, and sixth floors, provide sleeping-quarters for the group of 350 to 400 men. Junior officers or senior N.C.O.s normally share a room, while larger rooms each accommodate from six to eight airmen in

single beds.

In off hours, the "station" follows a normal routine. The men are never hard put to it to find something to do. Places which are little more to most Canadians than names heard in songs — Capri, Sorrento, and Santa Lucia (a part of Naples) — can be visited at little cost to the individual. The ruins of the ancient Roman city of Pompeii are near-by; so, too, is Mount Vesuvius, the volcano which buried the city when it erupted in 79 A.D. Naples' National Museum is the most important archeological museum in Europe, and it is also the home of the world-famous San Carlo Opera House. Movies are shown each night in the dining-room of the hotel, and a programme of organized sports is now under way.

The language problem, though it certainly exists, is not a great one. Italian is not a difficult tongue, and many of the Canadians have bought dictionaries of conversational Italian. None the less, amusing errors do occur, as the following little incident will serve to indicate.

One of the aircrew officers went to a local store to purchase a transformer for his electric razor. After much arm-waving, the proprietor smiled knowingly, reached under the counter, and produced a gadget which appeared to be the answer

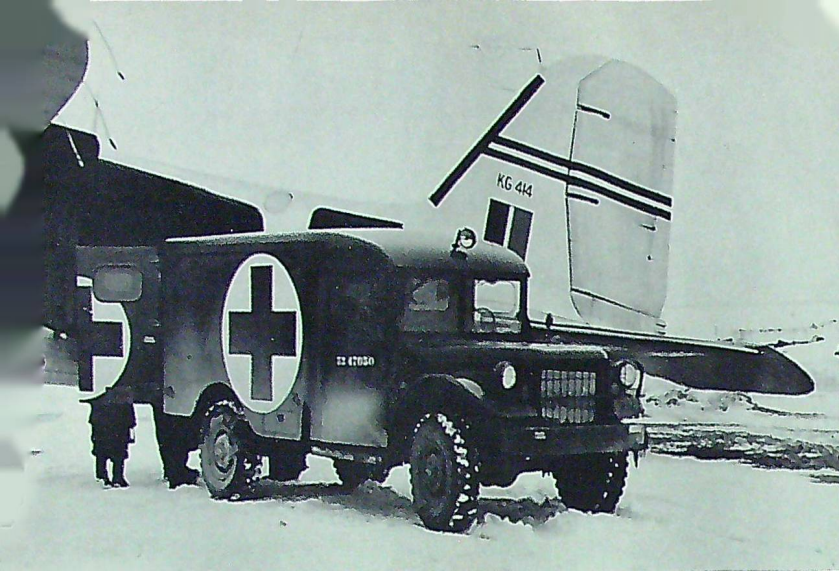
to the problem. Next morning, when the officer plugged in his razor, he was gratified to hear the familiar hum, but each time he lifted the razor to his face, it cut out. Later, much to his chagrin, he discovered that he had bought a transformer intended for use with a string of Christmas-tree lights of the kind that turn on and off.

* * *

As we write, the airlift is continuing day after day with unflinching regularity, and we can be justly proud of the men responsible for it. No. 435 Squadron is indeed living up to its motto: *Certi Provehendi—Determined on Delivery.*

Flying Officer A. Zahn chats with Egyptian groundcrew at Abu Suweir.





Evacuees from Baker Lake arrive at Churchill.

Stand-by at Churchill

BY SQUADRON LEADER R. WOOD,
Staff Officer Public Relations, Training Command.

(R.C.A.F. Communication and Rescue Units are established at various strategic points across Canada. The article which follows describes a not unusual interval in the lives of the six-man crew of Dakota 414 during a ten-day stand-by for emergencies on the DEW Line. It is based on a log kept by Flying Officer R. Dalphy, the aircraft's radio officer.—Editor.)

“O.K., O.K.! Don't flip!”

Muttering impatiently, Flying Officer Ron Dalphy shuffled down the corridor towards the insistent 'phone. It was 5 a.m., but even at Fort Churchill that's an ungodly hour to be awakened from a sound sleep.

He lifted the receiver off the hook. At the other end of the line, a crisp voice said:

“This is Operations. I want to speak to Flying Officer LeBlanc. It's urgent.”

“Yes, sir. I'll get him.”

Now fully awake, Dalphy left the receiver dangling and hurried off to arouse his skipper.

Flying Officer D. LeBlanc and his six-man crew had left their base at Trenton a few days earlier. With their aircraft, *Dakota 414*, they had been assigned the task of standing-by at Fort Churchill for possible rescue operations in connection with DEW Line flights. The bad weather that had dogged them on their flight up was still with them

—low ceilings and frontal systems that seemed to be lined up from Hudson Bay all the way to the Yukon.

The call was from Flight Lieutenant “Bounce” Weir, one of Canada's best-known northern pilots, who was then serving at Churchill as Ops. Officer. A message had been received from the R.C.M.P. constable at Baker Lake requesting an airlift from Mallory Lake, some 400 miles N.N.W. of Churchill. An Eskimo, suffering from pneumonia, required immediate evacuation to a hospital. Also, the food situation in the settlement was critical.

LeBlanc alerted his crew. Then, after a short briefing and the usual weather-check, No. 414 was airborne and on its way to Baker Lake, about 65 miles from its destination. In “marginal weather”, and fighting the headwinds that are almost traditional in that area, the *Dak* pressed on. It carried only one passenger on its outward trip, a ten-year-old Eskimo boy who was

returning home to Baker Lake after a month or so of medical treatment at Churchill. Hunched at the end of a long row of bucket-seats, and dressed in blue jeans and a wind-breaker, the lonely little “Davy Crockett” looked strangely out of place. As the 'plane neared his home, he was induced by Corporals McLarty and Saunders, not without difficulty, to discard these inadequate garments in favour of the more appropriate jacket and pants of caribou skin.

In summer, aircraft land at Baker Lake on the neighbouring gravel strip, but in winter the lake itself provides the best possible landing-area. When, on the present occasion, LeBlanc set his 'plane down on the ice, the temperature was about 26° below zero and a bitter wind was blowing. He kept the engines running in order to avoid any possibility of their freezing up while the supplies and passengers were taken on board; then, accompanied by Cpl. Dent of the R.C.M.P., a male nurse, and a native interpreter, he took off for Mallory Lake.

The settlement proved to be barely worthy of the name. It consisted merely of a cluster of five igloos joined together and buried

deep in the snow. Some had clear ice for windows. Three families lived there, using three of the igloos for sleeping and the other two for storage. There was not much to store, however; nor, as far as the visitors could see, did what little there was include any food.

The first shock came when, after questioning the natives, Cpl. Dent ascertained that the patient they had come for had died during the preceding week. It was not necessary to know the language to realize the grimness of the situation. The unfortunate natives' smiles of welcome could not hide the suffering they'd been through. Without exception, all of them showed the effects of malnutrition. Some had colds, others influenza — among them the elderly and grief-stricken wife of the dead man. Two of the women had pneumonia; and one of the children, a small boy, was running a fever and was obviously very ill indeed. Nevertheless, weak as they all were, the male Eskimos insisted in helping with unloading

the bags of food.

Immediate evacuation of the two sick women and the child was imperative. Meanwhile, the nurse administered to those who were to be left behind. One of the mothers took her small baby from his papoose-pack and held him, stark naked, while he had a boil on his shoulder treated. It was the size of an olive; but despite both the pain and the cold, the little fellow chuckled with glee at the attention being given him. When the nurse had done all he could, the three evacuees were carefully bundled in warm clothing, taken on board the *Dak*, and flown back to the native hospital at Baker Lake.

But the day's work was not yet ended. Two other patients from the hospital required airlift to Fort Churchill. One of these was an Eskimo woman, 5 months pregnant, with a heart condition that had been aggravated by pneumonia.

During the long flight back to Churchill it became evident that she was in a critical condition, suf-

fering great pain. The crew members tried to offer some comfort, but their inability to speak her language formed a barrier. Later, as the aircraft neared its destination, the co-pilot called the tower to inform the controller of the emergency. When the aircraft landed, Canadian Army doctors and an ambulance were waiting on the tarmac. Both patients were rushed to the military hospital, but, in spite of all that could be done, the woman died during the night.

Dakota 414 was to remain at Churchill seven more days. Three of these were spent on a 24-hour stand-by for a civilian aircraft reported overdue (it was reported later at Chesterfield Inlet). One more round trip was made to Baker Lake, this time with a Canadian Army medical team on board, and five patients were brought back to Churchill. Even when the morning for departure arrived, the first leg of the flight turned out to be one of mercy. As they were about to take off, the names of six patients appeared on the manifest: two military, one civilian, and three Eskimo.

* * *

The sirens of the ambulances that had met the aircraft at Winnipeg faded in the distance. Back in the 'plane, Flying Officer Bill Eddles, the navigator, was busy stuffing dividers, computers, and the many other gadgets of his trade, into the bag that's never big enough. As he did so, his eye caught an entry made on a bit of paper some days earlier. It read: "Winnipeg to Churchill, track 011, distance 543 nautical miles, time four hours and 13 minutes." Scribbled at the bottom was a note: "Stand-by".

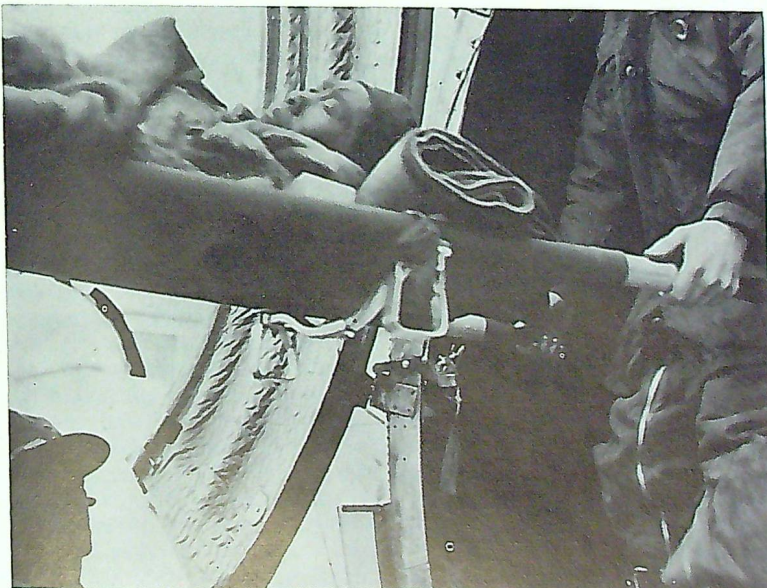
Grinning, Bill turned to Cpl. Saunders.

"Corporal, I've got news for you."

"What's that, sir?"

"Our stand-by 'touch' is over. Tomorrow we go back to work."

Eskimo woman being taken from aircraft at Churchill.



Love

conquers

all

An Inspirational Story

BY LEADING AIRWOMAN S. BUCKLEY



ONCE upon a time there was an Air Force Station. On this station there was an Accounts Section, and in the Accounts Section there was an Airwoman. She was a very high type of Airwoman and a very fine Clerk Accountant (Group 2).

Our Airwoman's name was Tabby Dabby. When she came to work in the morning (always half an hour before she was due), her uniform was invariably pressed, her tie neatly knotted, and her shirt-collar bristling with starch. Her shoes . . . ah, her shoes were works of art. One could apply lipstick, comb one's hair, or shave by their reflection. Naturally, she did not smoke or drink.

Tabby Dabby did not like weekends very much. They kept her away from her work. Her work was everything to her. However, she usually managed to set a little aside during the week, which enabled her to come in on Saturday or Sunday to clear up. Then she could console herself by knowing that Monday would come very soon and she would be back at her daily task.

Trade Board Time was wondrous and beautiful. Those delightful hours spent studying! The Section always knew when there was a trade board due: Tabby Dabby was so smiling and cheerful. Not that she wasn't like that all the time,

but at these periods she seemed positively bursting with joy.

It was said that some of the other Airwomen did not like clean-up night very much. Tabby Dabby found it hard to believe this. She could squeeze her mop better than anyone on the station. In fact, it was so enjoyable to her that she actually begged her Barrack Corporal to make it twice a week instead of only once. She always insisted on helping the civilian woman who came every day (Saturday and Sunday excepted) by sweeping the halls and emptying

the garbage. But the biggest thrill was when she was allowed to hold the floor-polisher for the daily buffing. Life was full of wonder and happiness. In fact, she could not imagine anything that might add to her bliss.

Nevertheless, incredible though it may seem, something *did* come along to improve her lot. It was something that rarely comes into any Airwoman's life. It was a MAN. His name was Bill. He was posted to the same station and was an M.E. driver. Bill was a Group 3, but since he was very modest about it, this did not stand in their way. He was handsome, wealthy, and debonair. In fact, he was the usual Airman.

The first time they saw each other was when Bill was sent to the Section to drive the Pay Officer to the bank. He was assigned to this duty every payday. It was love at first sight. Their eyes met over the Pension Plan pamphlet. For two months after that Bill would come in every day and stand by Tabby's desk for a few minutes, and they would discuss the weather over the ledgers. The time was nearing when Bill would ask Tabby Dabby for a date. Indeed, it was a whirlwind courtship.

But things were going too well in our little Garden of Eden. One day disaster struck.



It began, innocently enough, with the mid-month pay-parade. Tabby had prepared her Acquittance Roll with her customary love and care, and the boys and girls (since most of them still had plenty to carry them through the next few weeks) had accepted their pay with the usual reluctance. All went well until the time came for that delightful procedure known as "Balancing the Pay Parade". Then it was that the terrible discovery was made. They were one cent out. One cent of the Air Force's money could not be accounted for. That day is still spoken of, in Accounts circles, as "Black Thursday".

The reactions of the Pay Officer, who was an old-timer and shortly due to retire on pension, need not be described. Only repeated cups of coffee steadied his hand sufficiently to enable him to write his report to the C.O. And as for the reactions of the C.O.—well!

The C.O., however, was a man of action. A state of emergency was declared. Nobody was allowed to enter or leave the station. Only those working on the case were permitted to leave barracks. "Operation Penny" was under way, and the first thing done was to search the station for the elusive copper. It was not found. All that was found — in a dark corner of the wet canteen — was an airman who had been missing since the fall of '52. Days passed . . . then weeks. The matter was beginning to assume national importance. Yes, they were even considering an amendment to the National Defence Act that would enable them to "write off" the missing cent. . .

But how, the Troubled Reader asks, does Tabby Dabby fit into all this?

She fits in, Troubled Reader, because it was Bill's love for her that had occasioned all the trouble. There was also, you see, a Bad Airwoman on the station. She did not shine her shoes or press her uni-



form every day. Her work did not come before everything else. But she *did* have her eyes on Bill, while neither Bill nor Tabby had their eyes on anyone except each other. Thus, the Bad Airwoman, who had taken the cent in order to indulge her depraved passion for coke, had been able to falsify Tabby's Acquittance Roll. She hoped that Bill's faith in Tabby would thereby be destroyed.

Bill's faith, though, was of sterner fibre. For a few days he wrestled with his suspicions; then his finer nature asserted itself. He went to see Tabby Dabby. He gazed at her with eyes wherein love and doubt strove for supremacy.

"Tabby," he said, "can you lay your hand upon a copy of Q.R. (Air) and swear to me, on your honour as an Airwoman, that you are innocent of any attempt to defraud Her Majesty?"

"I can", answered the girl, the propeller on her arm glowing with a pure light.

"Good. Then leave it to me, my darling."

With that, Bill marched out and went straight to his bank, where he drew one cent from his account. This done, he proceeded stealthily to the scene of the fateful pay-parade and inserted the coin in a crack between the floor-boards. Then he went to the Accounts orderly room and announced his "discovery" to the N.C.O. in charge.

We need not say how great was the jubilation on the station. The C.O. recommended Bill for remuster into the Security Branch and accelerated promotion to the rank of Corporal. Delirious with joy, Tabby and Bill gave full rein to their impetuosity and were married less than three years later. Of course, they had to economize at first, in order to make up for the sum Bill had so nobly spent in clearing Tabby's name. But what will love not accomplish? They have already managed to buy an Elvis Presley record which they play on their friends' record-players every Thanksgiving Day.

As for the Bad Airwoman, she became a Prey to her Conscience. After it had preyed upon her for several months, she changed her ways and gave up coke. Eventually she even managed to save enough to buy Tabby's first-born an all-day sucker—and although it choked the child, it proved that her heart was in the right place after all.



ERRATUM

Apologies are extended to Squadron Leader G. B. Waterman for an error made in his article, "Intercontinental Bogey-Man", which appeared in our December issue. The second sentence of the first paragraph on page 9 should read: "The Machine was travelling far too rapidly to attempt evasive action, but not too quickly to search for and pin-point its target."

20th Anniversary Reunion (1957)



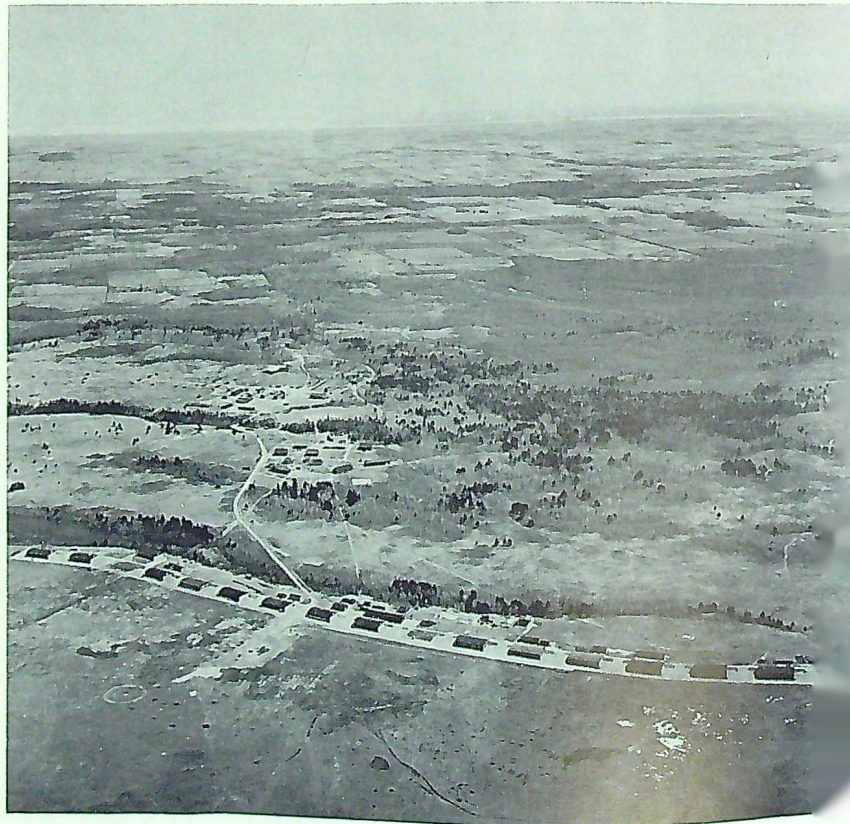
Camp Borden, 1937.

SOME time during the first half of this year, a number of officers and airmen will complete their twentieth year of continuous service in the R.C.A.F. One hundred and thirty of the recruits who made up the 1937 intake at No. 2 Technical Training School, Camp Borden, are still serving. They represent 2,600 years of service in the Air Force: if we include their instructors, the total is more than 3,000.

To celebrate the anniversary in the proper manner, it is tentatively planned to hold a reunion of the serving members referred to and of as many of their instructors as possible. July or August has been suggested as the most suitable month for it, and Toronto as the most convenient place.

A reunion committee has been set up, and further details will be mailed directly to all those eligible. In the meantime, suggestions are invited from everyone concerned. They should be forwarded to the reunion co-ordinator:

**Flight Lieutenant A. C. Maskell,
72 Dixon Drive,
Trenton, Ont.**





Front row (left to right): Aircraftmen 2nd class G. R. Denison (Squadron Leader), J. L. Arnold (Warrant Officer 1st class), M. E. Whyte (Warrant Officer 2nd class), W. P. Curley (W.O. 2), S. W. Little (deceased), E. Auger (released), R. H. Wilson (Flying Officer), W. Harle (Flight Lieutenant), C. R. Prince (rel.), E. J. Winter (rel.), E. G. Todd (rel.), W. A. Yager (Flt. Lt.), G. E. Townson (rel.), S. M. Miskey (W.O. 2), C. W. McNab (Wing Commander), J. D. McIntosh (W.O. 1), A. V. Maxwell (dec.), B. E. Bettin (W.O. 1), F. A. Feldman (dec.), F. E. Songhurst (Wing Cdr.), C. W. Story (W.O. 1), K. G. Greenway (rel.), M. W. Corbett (W.O. 2), H. E. Calver (rel.), A. W. Nelson (Flt. Lt.), R. P. Robichaud (rel.), W. H. Richardson (W.O. 2), W. D. Clark (now R.C.N.) P. A. Oleskevics (rel.), T. L. Story (rel.), H. M. Buck (rel.), N. J. Wen (rel.), R. I. Cook (W.O. 1), R. C. Keeble, (rel.), J. L. Turgeon (rel.), A. G. Russell (Flt. Lt.), L. K. Firth (Sqn. Ldr.), J. H. MacDonald (rel.), J. D. Barlow (rel.), J. S. Daniels (Flying Officer), J. F. McMahon (rel.), A. D. Pearce (Sqn. Ldr.), R. A. Murphy (rel.), R. L. Thorburn (Flight Sergeant).

Second row (l. to r.): A. C. 2s A. D. Sabourin (rel.), A. C. Taylor (rel.), G. F. Clarke (W.O. 2), H. S. Clarke (rel.), J. S. Morris (Flying Officer), W. F. Balfour (Flying Officer), A. C. Maskell (Flt. Lt.), F. Szastkiw (W.O. 2), C. G. Sloat (Sergeant), F. Fairhurst (Flt. Sgt.), B. H. Zdan (dec.), L. W. Queale (Wing Cdr.), J. A. Loucks (W.O. 2), Corporals K. A. Horton (ret.), F. W. Kirkaldy (Wing Cdr., ret.), W. Skelding (Wing Cdr., ret.), W. G. Harvey (Wing Cdr.), T. E. Watts (W.O. 1, ret.), H. E. Barry (dec.), Sergeants C. Hanson (Flt. Lt., ret.), L. G. Millar (Flt. Lt., ret.), Flt. Sgt. J. Nicholson (Wing Cdr., ret.), Flt. Lt. E. E. Moore (Sqn. Ldr., ret.), Flt. Sgts. J. D. Syme (Group Capt., ret.), W. Wilcox (Flt. Lt., ret.), Sgts. A. E. Hopkins (Flt. Lt. rel.), H. W. Roberge (W.O. 1), D. O. Craig (Cpl., rel.), Cpls. C. A. Armstrong (Sqn. Ldr.), J. S. Jordan (Wing Cdr.), O. R. Alty (rel.), R. F. E. Kempster (Wing Cdr.), A. G. Wilson (Sgt., rel.), A. C. 2s G. G. Moore (rel.), W. F. Olson (Flying Officer), H. R. Lanyon (rel.), R. A. Hunt (Flt. Lt.), R. Patillo (Flt. Lt.), E. B. Brackenbury (Flying Officer), C. W. Baine (Flying Officer), J. Burianyak (Flt. Lt.), J. H. MacDonald (Flying Officer), F. Zayezterski (dec.), L. J. McMahon (Flying Officer), T. A. Smeed (Flt. Lt.), H. Jones (W.O. 1).

Third row (l. to r.): A. C. 2s W. H. Walker (Sgt.), J. K. Robertson (W.O. 2), J. F. Murphy (Sqn. Ldr.), J. H. Haime (dec.), P. E. Hogan (rel.), W. L. Hornidge (Flt. Sgt.), L. A. Lang (W.O. 1), A. A. Edlund (rel.), C. E. Rooney (W.O. 2), T. A. Seeman (dec.), W. Gray (Flt. Lt.), K. McDermott (rel.), A. T. Sunderland (Flying Officer), W. C. Hinkley (W.O. 2), G. C. Osbourne (rel.), C. H. Miller (rel.), J. B. O'Brien (W.O. 2), R. M. Rubel (Wing Cdr.), C. J. Fisher (rel.), G. F. Veryard (rel.), C. S. Pocock (Flt. Sgt.), L. G. Beecroft (W.O. 2), T. H. O'Neill (W.O. 1), H. C. Briscoe (Flying Officer), A. C. 1 J. W. Ralston (Flt. Lt.), A. C. 2s J. A. Biehler (Sqn. Ldr.), R. H. Strong (W.O. 1), K. Bain (rel.), H. D. Haigh (W.O. 2), B. C. Magnus (Flying Officer), C. P. Irish (rel.), J. J. Cook (Flying Officer), S. W. Harding (W.O. 1), J. Munn (W.O. 1), A. J. Robertson (rel.), J. A. Sagar (Flt. Sgt.), A. L. Gagnon (rel.), W. R. Ruffell (Flt. Sgt.), C. Brooks (rel.), D. E. Pratt (Flt. Lt.), C. T. Holmes (Flt. Sgt.), B. T. Walsh (Flt. Lt.), A. L. Graham (W.O. 2), G. E. Nugent (rel.), T. J. McLoughlin (rel.), J. G. St. Arnaud (Sqn. Ldr.), C. L. Bourgeois (rel.), J. S. Whiddon (rel.), R. O. Rice (rel.), W. J. Bateson (W.O. 2), J. C. Henry (rel.), P. E. Michel (Sqn. Ldr.), G. R. Hibberd (W.O. 1), F. J. Dadswell (W.O. 2), A. H. Huycke (W.O. 1), L. M. Truman (Flt. Lt.), B. A. Dawson (Flying Officer), L. T. Pollock (rel.), J. K. Halls (Sgt.), L. Foan (rel.), W. Fedor (rel.), R. C. Crampton (Flying Officer), K. Williams (rel.), K. D. Flynn (Flt. Sgt.), J. W. Hunter (Flt. Sgt.).

Rear row (l. to r.): A. C. 2s K. C. Carter (Flying Officer), F. A. Baldwin (rel.), R. M. Bragg (Flt. Lt.), C. G. MacDonald (Sqn. Ldr.), J. K. Robinson (W.O. 2), R. V. Briggs (rel.), R. E. McFarlane (W.O. 2), D. R. Garside (A/Sgt.), C. C. Willis (A/Wing Cdr.), L. Lonsberry (W.O. 2), E. C. Gonnason (W.O. 1), A. E. Thomas (Flt. Sgt.), S. J. Pomes (rel.), G. J. F. Lagacé (W.O. 2), H. A. Lutes (Sqn. Ldr.), M. A. Westell (W.O. 1), F. R. Jarrett (W.O. 1), E. J. Leake (rel.), R. M. Greaves (rel.), R. A. Englebert (Flt. Sgt.), W. J. Edwards (rel.), O. G. Dendy (W.O. 1), J. E. Byers (W.O. 2), D. A. Rennie (dec.), J. S. Brock (Flying Officer), C. W. Evans (rel.), D. A. Duston (Flt. Lt.), R. F. Sheppard (Flt. Lt.), E. I. Glass (dec.), C. E. Bridges (Flt. Sgt.), R. A. Griffin (W.O. 2), J. R. Berkofsky (Flying Officer, ret.), T. C. Bell (rel.), E. Thornhill (Flying Officer), G. R. Sleeman (rel.), G. G. McCredie (Flt. Sgt.), M. J. Tickey (rel.), S. E. Kell (Flying Officer), H. M. Goode (W.O. 1), P. L. DesLauriers (rel.), J. A. Elviss (Sqn. Ldr.), E. L. Hierlihy (W.O. 2), L. G. Laramée (now R.C.N.), R. F. McConnell (W.O. 1), W. M. Thompson (W.O. 1), F. B. Machan (W.O. 1), J. Kutcher (rel.), O. W. Hill (rel.).

Missing from photograph: A. C. 2s H. L. Dole (W.O. 1), J. A. Chamberland (rel.), J. W. Hornick (rel.), A. Wharton (rel.), F. G. Buckley (W.O. 1), J. H. Quirt (dec.), W. J. Irving (Flt. Lt.), W. J. Mullen (Sqn. Ldr.), A. R. Latremouille (Flt. Lt.), Q. J. Gleeson (W.O. 2), F. O. Rennick (rel.), J. K. Young (Sqn. Ldr.), W. E. Tuller (Sqn. Ldr.), B. C. Walley (rel.), R. H. Rynard (W.O. 2), E. J. Cosgrove (rel.), C. P. East (rel.), W. C. Cralle (Flt. Lt.), G. S. McKeller (rel.), C. G. Nauss (Flying Officer), E. M. Peterson (rel.), W. E. Burnham (W.O. 1), H. B. Smith (Flt. Lt.), H. A. Paim (W.O. 1), J. W. Rynard (Flying Officer), L. R. Taylor (Flt. Sgt.), H. R. Hayward (rel.), G. R. Longstaff (Flt. Sgt.), W.O. 1s L. J. Dyte (Sqn. Ldr. ret.), P. J. Beaumont (Wing Cdr., ret.).

Royal Canadian Air Cadets

BY DARRELL EAGLES



Presentation of the Guthrie Shield to the most proficient squadron in N.W. Ontario. Left to right: Squadron Leader I. D. Tenove, Flight Lieutenant G. W. Fisher, Flt. Lt. R. Hardy (of Fort William's winning squadron, No. 66), Flt. Lt. J. J. Deslauriers.

EXECUTIVE COMMITTEE MEETING

“IN recognition of the outstanding services rendered in the work of establishing the Air Cadet League”, reads the inscription on the plaque presented to the Honourable George B. Foster, of Montreal, at a testimonial dinner given at the Seignior Club of the League's National Executive Committee. President E. M. Duggan of Edmonton made the presentation.

The presentation dinner was the highlight of a full day's meeting of the Executive Committee and National Advisory Board under the joint chairmanship of Mr. Duggan and Past-President George A. D. Will, of Nanton, Alberta. The R.C.A.F. representation was headed by Air Vice-Marshal C. R. Dunlap, C.B.E., Vice-Chief of Air Staff, and Air Vice-Marshal J. G. Kerr, C.B.E., A.F.C., Air Member for Personnel.

At the meeting it was decided to seek an increase in the maximum establishment of Air Cadets beyond the presently authorized 22,500, and also to recommend an increase of 10% in the number of cadets attending summer camp at Air Force stations, thus bringing the total to 5,500.

The League plans to intensify its campaign to secure privately donated flying scholarships in the coming year. Last year, the 250 flying scholarships contributed by the R.C.A.F. were supplemented by 74 privately donated scholarships.

C. Douglas Taylor was authorized to represent the League in meetings with several European countries which have expressed a desire to participate in the Air Cadet Exchange Visits programme. Canada at present exchanges 58 cadets every summer with six different countries.

Camp Borden will again play host to 200 cadets participating in the Drill Instructors' and Senior Leaders' courses.

During the summer months of 1957, selected cadets from areas outside the actual training centres will be able to attend courses provided by the R.C.A.F. Auxiliary under the Reserve Tradesmen Training Plan.

ANNUAL MEETING PLANS

The annual meeting of the League will be held in mid-February at the Château Laurier, Ottawa. During meetings, which will be under the chairmanship of League President E. M. Duggan, the delegates will hear reports, elect new officers, and lay plans for the coming year.

A special feature of the annual dinner this year is the expected attendance of a large number of

Members of Parliament who have been invited to sit in with the League at the observance of its sixteenth anniversary.

AIR CADET FILM

The new full-colour film, "The Air Cadet Story", is being enthusiastically received by the many squadrons who have ordered prints. They are finding it invaluable in telling the League's story to cadets, prospective cadets, parents, and various community groups.

The narration by Fred Davis, well known for his work in the C.B.C.'s television series, "Perspective", is ably supported by an original musical score played by the R.C.A.F. Central Band. The Hollywood phrase, "a cast of thousands", might well be applied to "The Air Cadet Story", for it covers squadron training, summer camp, special activities, flying training, drill instructors' and senior leaders' courses, and exchange visits, and it even includes a visit to the League's annual meeting at the Seignior Club. Original footage was taken under the direction of the late Art Hundert, of Vancouver, and the finished film was edited and recorded by Crawley Films.

The value of this picture is self-evident, and squadrons who have not as yet ordered prints are strongly urged to do so without delay.

TUDHOPE TROPHY WINNER

At the time of writing, it was announced that Norman G. Snihur, of No. 6 (Jim Whitecross) Squadron, Winnipeg, has been named winner of the Tudhope Trophy for 1956.

The trophy is awarded to the outstanding private pilot, below the age of 19, trained at flying clubs during the year. Arrangements have been made for Cadet Snihur to receive the trophy during the annual meeting of the Royal Canadian Flying



Nine League Presidents attended the dinner given for the Hon. G. B. Foster at the Seignior Club. Standing (l. to r.): E. M. Duggan (1956), C. D. Taylor (1946-47), D. A. Ross (1948-49), A. W. Carter (1945), H. D. Macgillivray (1953-54), G. A. D. Will (1955). Seated (l. to r.): A. L. Melling (1944), Hon. G. B. Foster (1941-42), D. R. MacLaren (1943). (Capital Press photo.)

Clubs Association, held at Ottawa early in the year.

NO. 589 (CARBONEAR) SQUADRON

From time to time, a few paragraphs of this section are devoted to the accomplishments of an outstanding squadron. This month, we pay tribute to No. 589 (Carbonear) Squadron, of Newfoundland.

Not content with winning the Macgillivray Trophy for the "most efficient Air Cadet squadron in the province", this two-year-old squadron also collected the Lions' Trophy for the highest score at summer camp, and the Gordon Morris Memorial Shield for the highest-scoring squadron in rifle-shooting.

A special ceremony, attended by a large number of parents and relatives of the 80 cadets, was held late in 1956 at the United Church

Academy for the presentation of the awards.

The squadron received other recognition of its achievements besides trophies. Cadets Rossiter, Penney, Pye, and Hiscock were presented with bugles by George Janes, secretary-treasurer of the squadron. The instruments were gifts from Dr. G. Kennedy, Dr. A. T. Rowe, Bob Nutbeem, and the local committee.

Flying Officer Hudson Davis has been commanding officer of the squadron since its inception. The Adjutant is Pilot Officer Lloyd Powell, and Pilot Officer John Clarke the Supply Officer. Chief Instructor is Pilot Officer Roy Noel, who is aided by Ernest Walsh, Wallace Burden, and Howard Sainsbury.

Committee Chairman Saunders, in his address, pointed out that a lot of diligent committee work is necessary to get a good Air Cadet

squadron organized. A lack of popular support in Carbonear in the early stages was overcome with the help of parents of the cadets, and now, with the benefits of cadet training evident in the boys themselves, the people of Carbonear "appreciate their squadron".

CALGARY CADETTES

Last year the annual local drill competition held in Calgary was won by No. 15 Wing's Cadettes for the third consecutive year, thus striking an unforgettable blow for feminine supremacy. Three other teams competed: No. 52 (Calgary) Squadron, No. 538 (Buffalo), and No. 604 (Moose).

The teams entering the annual competition are purely voluntary, and the three judges are all members of the R.C.A.F. Whether the girls have been won over by the gallant bearing of the judges, or whether the latter have used their eloquence as well as their judgement, we do not know; but the fact remains that three of the Cadettes have joined the Air Force.

Calgary's Cadettes. (Jack De Lorme photo.)

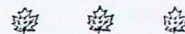


No. 52 (Calgary) Squadron's rifle team, which tied in its annual match with No. 187 (High River) Squadron. (Jack De Lorme photo.)



The great curse of public life is that you are not allowed to say all the things that you think. Some of my opinions about some men are extremely picturesque, and if you could only take a motion picture of them, you would think it was Vesuvius in eruption. Yet . . . I have to make believe that I have nothing but respectable and solemn thoughts all the time. (President Woodrow Wilson: 1916.)

R.C.A.F. Association



GREETINGS FROM THE CHAPLAINS

I take this opportunity, in the early weeks of 1957, of sending my greetings to all members of the Royal Canadian Air Force Association. You were my friends and comrades during the Second World War, you remain my friends and comrades today. Together we have been through great days in the past, nor will the days that lie ahead demand any less of our integrity and unselfish effort. As your chaplain, I send you my love and blessings for this and for each year that shall follow it.

*Archbishop R. J. Renison,
Honorary Chaplain (Prot.),
R.C.A.F. Association.*

At the dawn of a New Year, in an age of materialism such as ours, it is a good and salutary thought to remind ourselves that we are the children of God.

Such a relationship with our Creator imposes very definite limitations on the exercise of the gift

of free will with which He has endowed us. Physically, we are free to choose good and evil, but not so morally.

In its essence, and its right concept, free will is merely the faculty of choosing between righteous means to achieve our eternal destiny. When used otherwise, liberty degenerates into licence.

Let us, at the beginning of this New Year, dedicate ourselves, our whole selves, anew to the service of our Heavenly Father, and resolve to try, with His help, to live each day as if it were to be the last before being called to render an account of our stewardship.

In so doing, not only will we ourselves enjoy true happiness, which is the effect of interior peace, but we will most assuredly at the same time spread joy and happiness all around us. A Happy and Blessed New Year to all members and their families.

*Rt. Rev. A. Charest, C.B.E.,
Honorary Chaplain (R.C.),
R.C.A.F. Association.*

NO. 306 (MAPLE LEAF) WING, MONTREAL

Among the many guests at the annual Air Power Night were: Air Vice-Marshal W. E. Kennedy, A.F.C.; Air Vice-Marshal C. M. McEwen, C.B., M.C., D.F.C.; Air Vice-Marshal A. L. James, C.B.E.; Air Vice-Marshal F. S. McGill, C.B.; Group Captain D. A. Willis, D.F.C.; L. Fulton, president of the Quebec Group; and C. D. Taylor, hon. pres. of the Air Cadet League.

Air Vice-Marshal Kennedy addressed the meeting on the subject of air power, stressing the Association's contribution not only to the R.C.A.F., but to Canada as a whole.

At the end of his talk, the Air Vice-Marshal was presented with a silver stein by President S. Shernofsky.

NATIONAL EXECUTIVE MEETING

Twenty-two members of the National Executive Council attended the annual meeting held in Ottawa on 22 and 23 November 1956 under the chairmanship of the National

No. 700 Wing. Seated: Mr. W. Sears. Standing (l. to r.): Messrs. E. Searle, V. Sears, Mrs. J. F. Sears, Dr. T. Sears, Messrs. J. Sears, J. F. Sears.



Air Vice-Marshal W. E. Kennedy addressing No. 306 Wing.





No. 100 (Halifax) Wing members held a bon voyage party on the S.S. "Ivernia" just before she sailed for Europe on 21 December with 286 R.C.A.F. personnel and their dependents.

President, Air Vice-Marshal F. G. Wait, C.B.E. Several important decisions were made, among them the following:

Annual Convention

It was confirmed that the Seventh Annual Convention of the Association would be held in Saint John, N.B., on 6, 7, and 8 June 1957. Again the Association is most fortunate in having obtained guest speakers of prominence for the occasion.

Membership

The Group presidents, on behalf of their respective Groups, pledged to procure 2,000 new Wing members in order that the paid-up membership in the Association would reach 10,000.

NO. 700 (EDMONTON) WING

Recently the members of No. 700 Wing presented a membership to William Sears, a former member of the R.C.A.F. who is now a polio patient. Attending the function with Mr. Sears' parents were three brothers who had served in the R.C.A.F.

CHANGE OF ADDRESS

It is most important that we be notified of all changes of address. Issues of "The Roundel" which are missed by failure to notify us cannot always be provided at a later date. Members are asked to send

us a card, immediately upon moving, stating both their old and their new addresses. Send cards to:

The Secretary,
R.C.A.F. Association,
424 Metcalfe St.,
Ottawa, Ontario.

ANNUAL DUES

May we remind all Wing members that their annual dues are payable by 1 April. So, in order to ensure continued receipt of "The Roundel", please pay your 1957 dues as soon as possible.

The Seventh Annual Convention of the Royal Canadian Air Force Association will be held in Saint John, N.B., on 6, 7, and 8 June.

No. 404 (Kitchener-Waterloo) Wing. Left to right: A. J. Snetsinger, E. T. Dolan, N. Schneider, Air Commodore D. E. MacKell, C.B.E. (gen. mgr. of the R.C.A.F. Benevolent Fund), J. B. Lorentz, H. H. Beaupré, H. Shannon.





"L" for "LANC"

BY J. A. D. GRAY

(In December 1953, under the title "Obituary", we published a history of the Wellington, then recently "demobbed" from the R.A.F. The story of the Halifax followed a year later, and we now have the story of the aircraft which many war-time aircrew still regard as the noblest of them all. The author, who graduated from Service Flying Training School at Uplands in May 1943, was attached to the R.A.F. in England, where he flew all three of the above-mentioned types of aircraft. He completed a tour of operations with No. 101 Squadron at the end 1944, was awarded the D.F.C., and left the Service in the spring of 1945.—Editor.)

I BELIEVE it was Air Chief Marshal Sir Arthur Harris who referred to the Lancaster bomber as the "greatest single factor in winning the war". Be that as it may, it is an undeniable fact that the mighty *Lanc* was the outstanding heavy bomber to thunder its way across the pages of history in the Second World War. Together with its smaller cousins, the amazing *Mosquito* and the indomitable *Spitfire*, it led the field in the respective spheres of heavy, medium, and light military combat aircraft.

Avro's *Lancaster* was the four-engined development of the twin-engined *Manchester*, the biggest twin-engined bomber of its day, and both aircraft were the result of the efforts of that master designer, the late Mr. Roy Chadwick. Unfortunately, trouble was experienced with the 2000-h.p. Rolls-Royce *Vulture* engines of the *Manchester*. It

was said that several were lost due to engine fires. With typical ingenuity, the wings of the *Manchester* were lengthened and four of the rugged Rolls-Royce *Merlin* engines, which had proven themselves in (among others) the *Hurricanes*, *Spitfires*, *Wellingtons*, *Whitleys*, *Defiants*, and *Halifaxes*, were installed. Thus, early in 1942, the peerless *Lancaster* was born.

The early *Lancaster Mark I* utilized four *Merlin XX* engines of around 1280 h.p. each. Later *Mark Is* had *Merlin XXII*s and *XXIV*s, each of 1280 h.p., the latter being fitted with paddle-bladed propellers which resulted in improved performance at take-off and at high altitude — and also gave rise to the nickname of "Paddle-Steamer" bestowed by the crews who flew the aircraft. The *Lancaster IIs* were fitted with Bristol *Hercules* radial sleeve-valve engines of 1600

h.p. The *Mark IIIs* used Packard-built *Merlin XXXVIII*s, with which coolant difficulties were experienced, and Packard *Merlin XXXVIII*s, which were right up to Rolls-Royce standards. Both these Packard-built engines delivered 1280 horse-power. There were other Marks produced, including the Canadian-built *Lancaster X* which utilized the Packard *Merlins* and with which several Canadian bomber squadrons were equipped.

The *Lancaster* possessed one very important point in its favour (a point which unfortunately too many British bombers lacked), that of being designed for mass production. Component parts were manufactured in myriad small factories all over the United Kingdom and were shipped to other factories for assembly. As a result, once the *Lancs* were put into production, they began rolling out in ever-increasing numbers, to the relief of the R.A.F., hard-pressed as it was for really heavy bombers to carry the war to Germany *en masse*. True, the *Stirlings*, *Halifaxes*, and *Wellingtons* were doing yeoman service, but the numbers needed were sadly lacking.

To compare the *Lancaster* with its chief rivals in the heavy bomber field — the *Fortress*, *Liberator*, *Ha-*

lifax, and *Stirling* — is rather interesting, although, in the case of the first two mentioned, no comparison should be drawn, for they were designed essentially as heavily-armed long-range daylight bombers, whereas the *Lancaster* was primarily a night bomber, despite the fact it carried out some completely devastating daylight attacks.

In operational cruising speeds the *Lancaster*, *Halifax*, and *Stirling* were almost on a par, the *Halifax Mark III* and *VII* having a slight edge over the other two at medium and low altitudes. The average operational cruising speed, with bomb-load, of the *Lanc* at 15,000 feet was about 180 m.p.h. I.A.S.; for the *Halifax*, it was a little better. However, above 18,000 feet the *Lanc* had the edge. The *Lanc* also overtook the *Hally* in rate of climb at about 18,000 feet. Its operational ceiling was from 22,000 to 24,000 feet, depending on the aircraft and the pilot. The *Halifax's* ceiling was slightly less, and the *Stirling* was left far below at around 15,000 feet. The average operational cruising speed of the *Fortress* was in the neighbourhood of 160 miles per hour I.A.S. and the *Liberator* was slightly slower, but both these machines did most of their bombing at close to 30,000 feet, almost 10,000 feet higher than the two British aircraft.

In bomb-load the *Lanc* was the unquestioned leader, its closest rival in the European theatre being the *Stirling*, which carried up to 17,000 pounds of bombs on short trips. Even the B-29 *Super-Fortress*, which operated against Japan only toward the end of the war, although of greater dimensions and all-up weight, did not carry a bomb-load equal to the *Lancaster's*. The earliest *Lancasters* carried eight tons in various combinations of bombs which included the 4000-pound "Cookie" or "Block-Buster", or the 8000-pounder. Early in 1945, the

Lancasters were the aircraft that toted the huge 22,000-pound "Grand Slam" which destroyed the Bielefeld Viaduct and was Barnes Wallis's masterpiece of destruction. It was the greatest man-made "bang" until the advent of the atomic bomb. The *Halifax* was content to carry on with its six tons, and the *Fortress* and *Liberator* trailed with an operational load of around three tons; on long trips such as Berlin raids the best they could do was 3,000 pounds. This, of course, was necessitated by the additional weight of their numerous guns and extra ammunition and fuel.

The American 'planes carried about twelve .50 calibre and one 303 calibre machine-guns as against the British aircraft's eight or nine .303s. It was not until the summer of 1944 that the Rose rear turret, with two .50 calibre machine-guns, was installed in the *Lancaster*. The heavy guns were for daylight use, as the limited visibility at night made their longer range ineffective compared to the more rapid fire of the .303 Brownings.

In handling-properties, the *Lanc*, like the *Fortress*, was an extremely docile aircraft, neither having any wicked characteristics. The *Lanc*, empty, could be put into a steep turn of about 75 to 80 degrees of bank with one hand. Heavy loads made a minimum of difference in its handling. It could take off fully loaded with yards to spare on a 1450-yard runway in very light wind conditions, and, strangely enough, it would float on landing, while fully loaded, as though it was copying its little brother the *Anson*. It was capable of maintaining height at low altitudes, without load, on one engine; loaded, it could do so with two engines feathered on one side. In this latter condition it could almost be trimmed to fly hands-off, and on three engines it could actually gain height.

The *Lancaster* made what might be termed its public debut on April

17th, 1942, when two formations, numbering twelve *Lancs* in all, thundered at hedge-level across France and Germany to bomb the great M.A.N. Maschinenfabrik A.G. diesel-engine factory at Augsburg. Flying in tight formation, they were engaged by twenty-five to thirty German fighters over France. Four of the leading formation were shot down, but the remainder carried on, despite formidable opposition from anti-aircraft fire, to attack their objective successfully with delayed-action bombs. Three more were shot down after they had dropped their load, but the remaining five, all damaged, returned to base safely. This was carried out without fighter escort, and one V.C. and nineteen other awards were handed out to the members of the crews for their gallant effort.

On July 11th of the same year, *Lancasters* made what was the longest daylight raid of the war up to that time by a successful assault on the submarine base at Danzig and the shipyards at Flensburg. These raids were carried out at comparatively low level, and only three aircraft were lost.

Italy received its first daylight raid of the war on October 24th, when British-based *Lancasters* crossed the Alps to attack Milan. Thus the *Lancs*, with their mighty partners the *Hallies*, carried on their devastating work through the remaining years of the war. They led the great mass night-assaults of 1943 and 1944. Berlin and the Ruhr valley were favourite targets, but Stuttgart, Hamburg, Bremen, Kiel, Karlsruhe, and Frankfurt, were not overlooked. More remote targets were struck hard — Munich of beer-hall fame; Nürnberg, from which, on one night, ninety-four aircraft failed to return; and the Baltic port of Stettin, and Königsberg in East Prussia. Only the *Lanc* among British heavies had the range to attack some of these distant targets from England. The

Munich and Königsberg assaults entailed over ten hours of steady flying.

During the summer and autumn of 1944 an increased number of fighter-escorted daylight attacks were carried out. The cities and towns of the Ruhr — Cologne, Essen, Düsseldorf, Duisburg, Wanne Eickel, and Dortmund — were among those hit. Buzz-bomb sites and aerodromes in France and the Low Countries were visited frequently, and many tactical attacks were carried out in co-operation with the ground forces. Oil stores at Pauillac and Blaye, near Bordeaux, were raided successfully in daylight by several hundred low-flying *Lancs* in August 1944 on two successive days. One of their last offensive operations was the destruction of Hitler's mountain retreat at Berchtesgaden.

At the end of the war in the European theatre, the trusty *Lancs* had dropped a far greater weight of bombs than any other aircraft, but that was not their only duty. When the Pathfinder Force was

formed in August 1942, *Lancasters* were the heavy aircraft chosen for this important duty, and it was *Lancasters* which carried out the famous destruction of the Moehne and Eder dams on May 17th, 1943, for which Wing Commander Guy Gibson was awarded the V.C. Their record of service included also special duties such as jamming enemy radio, mine-laying, ferrying freed prisoners of war home, and dropping food to Dutch civilians.

* * *

At the time of writing, *Lancasters* are still carrying on in the vital, if less spectacular, work of the R.C.A.F.'s search and rescue squadrons and Maritime Command; and I imagine that there are still many of us around who look up at them with nostalgia, remembering the old aircraft's days of glory. . .

Yes, old friend, you were unbeatable in your time, but you are in your declining years now. Amazing-looking aircraft are screaming through the air at speeds which you in your prime could not even have dreamed about. But those of

us who knew you intimately, those whom you bore so faithfully through skies that were not all friendly, will remember well the all-engulfing snore of your four *Merlins* and the pale blue flickering flame from your exhausts in the blackness on either side.

Who could ever forget the pictures your wind-screen framed? — the dark woolly puffs among the sunlit clouds, the deadly sparkles in the dark among the weaving searchlights, or the finest picture of all, the black line of the English coast looming ahead with its pale, still, vertical fingers of light, and the red pundits flashing their letters.

You have droned your way into the immortality of history; and when your work finally is finished, your epitaph may well be:

*High-flying in paths of sunlight,
O'er clouds the moon had kissed,
Black in the blood-red sunset,
Or grey in the morning mist—
Target or load or distance
Were all the same to you:
Through hell and flak you roar'd, and
back
Above the stratos.*

NO. 22 WING (AUX.)



The attractive young ladies in the accompanying photograph constituted the drill team which, for the second year running, won the Jesse Clewlow Trophy in the annual marching competition held each year on Warriors' Day at the Western Fair, London, Ont. This year they also won the Duchess of Kent Trophy, awarded by the Canadian Legion. Their instructors were Sergeant J. Winter and Flight Sergeant "Mac" McIntosh. The requisite rhythms for practice were provided by the trusty drum of Corporal T. Peers.



The Suggestion Box

The Chief of the Air Staff has written letters of thanks to the under-mentioned personnel for original ideas which have been officially adopted by the R.C.A.F.

Leading Aircraftman L. J. Jean, of R.C.A.F. Station Chatham, designed a time-saving tool for adjusting the idling-speed of the *Orenda 10* engine.

Sergeant L. B. Tucker, of R.C.A.F. Station Cold Lake, devised an improved tool for pulling canopy rails of CP-100 aircraft during overhaul.

Flight Lieutenant H. B. Ripstein suggested an amendment to A.F.A.O.s which will encourage the submission by unit commanders of letters of commendation on personnel who have demonstrated special aptitudes or effort.



L.A.C. L. J. Jean.



Sgt. L. B. Tucker.



Flt. Lt. H. B. Ripstein.

"The Direction of War"

A brief review by Air Commodore C. L. Annis, O.B.E.

AIR VICE-MARSHAL E. J. Kingston-McCloughry* sets out to show that, even in the days of only two armed services, the organization for the higher direction of war consistently lagged behind the needs of the times and failed to exploit the potentialities of new weapons. With the formation of a third armed service — the Air Force — the organization for higher direction fell still further behind. The author, having considered the tremendous leaps ahead in the power, cost, and versatility of the weapons now in

use and in prospect, feels that the organization is intolerably inadequate for conducting either a hot or a cold war. He has concluded that the armed services are, of themselves, unable to contrive the sweeping reorganization which is essential, and that such reform is attainable only through "the whole nation's positive sympathy and active support".

Thus, it seems, "The Direction of War" sets out primarily to demonstrate that the present organization for the higher direction of war is indeed inadequate. In this respect the author has been successful, even though the generally well-informed reader will find little material that has not been already of-

fered by other military historians and analysts.

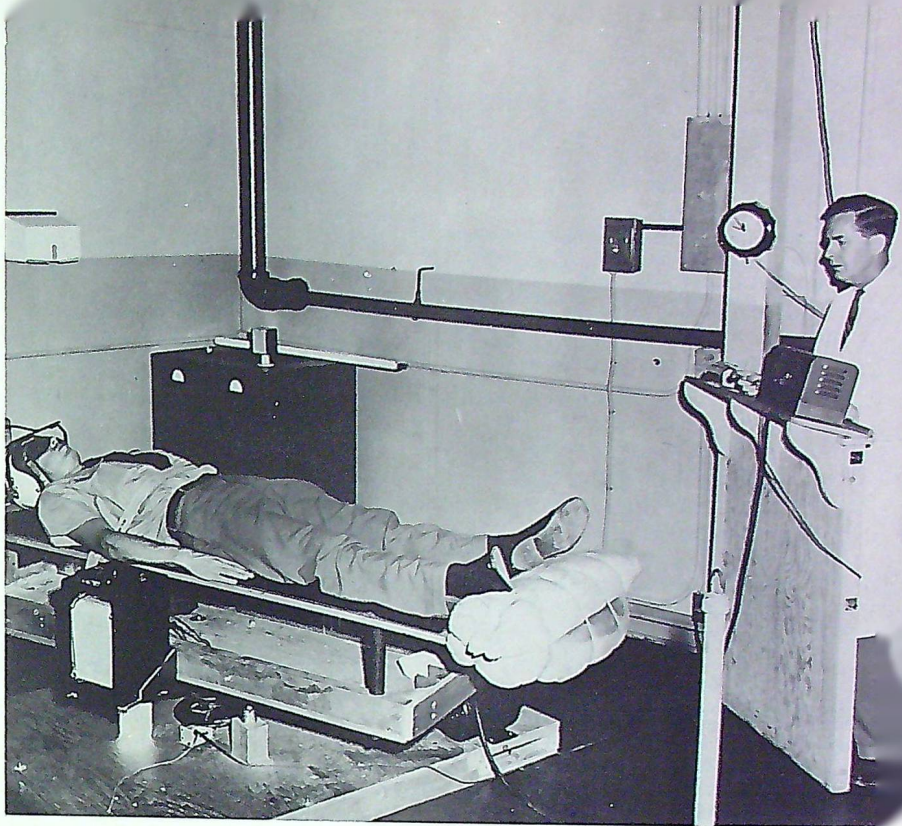
For the reader who may already be persuaded "that the three Services should overcome their partisan approach to new weapons and new methods" in order to achieve "true unity of command and the best possible use of our resources", only little in the way of constructive suggestion is offered. Many broad principles are held aloft as a basis for the new order; but the author appears to leave it to his readers to combine in doing the reflective and constructive thinking which he is persuaded is so necessary.

*"The Direction of War", by Air Vice-Marshal E. J. Kingston-McCloughry, R.A.F. Distributed in Canada by Clark, Irwin & Co. Ltd., 103 St. Clair Ave. W., Toronto 5, Ont. Price: \$3.25.



CANADA'S DEFENCE RESEARCH BOARD

BY C. A. POPE,
Public Relations Officer, D.R.B.



Motion-sickness study at D.R.M.L. The subject is rotated on turn-table at varying accelerations.

(The Defence Research Board, which is, in effect, a fourth — and civilian — service operating under the Minister of National Defence, has a threefold responsibility. First, it must supervise the formulation of the broad general policies for defence research and development in Canada; secondly, it must supervise the programmes designed to implement these policies and carried on by universities, industry, and government laboratories; and, thirdly, it must direct the operations of the Board's own establishments. The work of the Board is, of course, largely performed at a high level of secrecy, but Mr. Pope's article should serve to give some small indication of the type of problem with which the Board is called upon to deal and of the way in which it approaches its task.—Editor.)

BEFORE the Second World War, defence research and development in Canada was carried out on a very limited scale by a few individuals. Chief of these individuals was General A. G. L. McNaughton, then President of the National Research Council. During the war, scientists of the National Research Council rendered yeoman service in a wide variety of fields, including radar and atomic energy. Their efforts showed that Canadian science could provide vitally important support to the fighting forces.

With the war in Europe over, and with the struggle in the Orient drawing to a close, it became apparent that, in the future, Canada must maintain much larger military peace-time forces than she had ever done before. It was evident, too, that the extensive technical advances in military methods and equipment would require an active programme of defence research and development, commensurate in size with the needs of the Services.

Therefore, in February 1946, after

discussion by the Chiefs of Staff and consultations with some of Canada's leading scientists, the government assigned to Dr. O. M. Solandt the job of determining the basic organization necessary for defence research and development in Canada.

Because of fundamental professional differences between scientist and soldier, it was decided to separate the organization for defence research from the Services. At the same time, stress was laid on the need for close relations with the armed forces and for a proper defence motivation. Thus, while the National Research Council provided a valuable organization model, it was felt that a separate scientific entity within the Department of National Defence was required.

This entity came into being early in 1947. Its three main purposes were:

- to use existing research and development facilities to meet the needs of the armed forces wherever possible;

- to maintain the closest possible collaboration with the United Kingdom and the United States, thus allowing D.R.B. to concentrate its effort on a limited number of problems of particular importance to Canada, or for which Canada has unique resources or facilities; and
- to do everything possible to further the progress of standardization, a subject of vital concern to Canada.

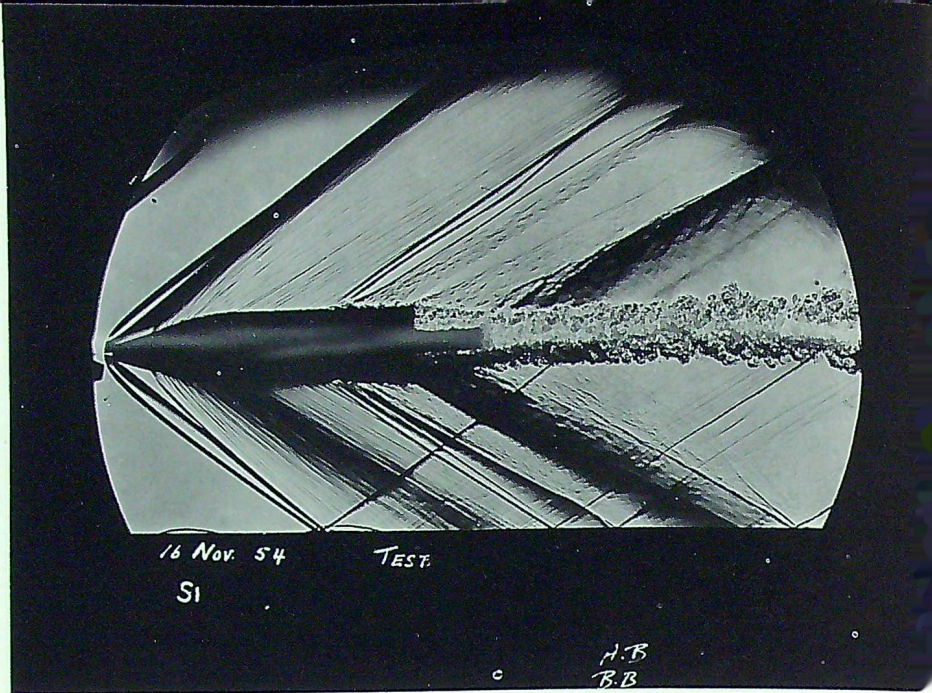
* * *

To carry out its ambitious programme, the Board maintains a number of specialized research establishments across the country. The Canadian Armament Research and Development Establishment (C.A.R.D.E.), near Valcartier military camp and about 17 miles from Quebec City, is the Board's largest research station. Its principal activities have included the development of an air-to-air guided missile for the R.C.A.F., research on new explosives and propellants, and the development and testing of new and improved weapons.

Five years ago, little was known in Canada about the important subject of guided missiles. As a result of the C.A.R.D.E. project, Canada now has an experienced and well-informed group of experts in this field. Members of the team are qualified not only to develop missiles but also to evaluate similar weapons produced elsewhere.

The establishment's research facilities might well be described as dramatic. Among them is a 780-foot aeroballistics range, of reinforced concrete, where models of projectiles of all types are fired from a gun mounted outside the range. The projectiles enter through a small opening and are photographed and studied as they speed towards the butts at the far end of the tunnel.

Complicated aerodynamic studies, concerning the configuration of guided-missile models and a variety of allied projects, are carried out here almost daily. The only tunnel of its kind in Canada, its frequent use has resulted in the development of new techniques which are being studied closely by other western countries and, in many



High-speed photography, taken at C.A.R.D.E., of a bullet in flight at 2,400 ft. per second.

cases, adopted for their own aerodynamics investigations.

Experimental and improved propellants for all types of weapons are developed at C.A.R.D.E. in what has been described as one of the world's leading propellants pilot-plants. The C.A.R.D.E. installation, employed to improve the performance of the weapons of all three Services, is equipped with a television observation set, a deluge system, and crash doors — all most necessary safety facilities.

R.C.A.F. personnel employed at the establishment constitute a military unit but remain integrated with the laboratory. About five years ago, the R.C.A.F. formed the unit to participate in armament development projects.

A particularly important feature of C.A.R.D.E.'s activities is the invaluable advice and assistance contributed on the spot by Service technical officers. This co-operation with the scientists is resulting in the development of new and improved weapons with increased striking-power for all three Services.

* * *

The Electronics Laboratory (E.L.), Ottawa, and the Radio Physics Lab-

oratory (R.P.L.) at Shirley Bay, about 10 miles west of Ottawa, together comprise the Defence Research Telecommunications Establishment (D.R.T.E.).

Scientists and technicians at E.L. apply electronic techniques to the solution of specific communication (and related) problems. Because of their defence implications, most of the projects are classified. Staff members have contributed to the Board's air-to-air guided missile project by developing component parts. In addition, transistors and their applications are being studied, and representatives from Canadian industry receive courses of instruction in the techniques and uses of transistors generally.

Another E.L. activity is the miniaturization of Service equipment, particularly that related to communications. By the use of lightweight materials, transistors, and other techniques, the scientists are gradually reducing the weight of a variety of Service equipments.

R.P.L. is responsible primarily for radio-propagation problems. In particular, it concerns itself with investigations of radio communications in the Arctic, where the presence of the auroral zone creates unique difficulties. Staff members have been prominent in the testing

and evaluation of the Mid-Canada Line units developed originally by a combination of scientists from Board Laboratories, McGill University, and the National Research Council.

R.P.L. plays an important rôle also in the system of ionospheric recording stations operated for D.R.B. by the Department of Transport. The information collected by these stations, located at Ottawa and in the far north, is forwarded to Washington from R.P.L., collated, and distributed openly as wave-length forecasts for various parts of the world. Fundamental research, with possible future defence applications, is carried on continually at the Shirley Bay laboratory. In particular, studies involving ionospheric phenomena are providing useful information.

In association with the University of Saskatchewan, R.P.L. scientists are probing the causes and effects of the aurora borealis, or northern lights. A phenomenon which covers most of northern Canada, the aurora borealis frequently affects northern communications. As a result of the joint investigations, Canada is one of the world's most knowledgeable countries in this field.

The Operational Research Group (O.R.G.), with offices adjacent to Headquarters in Ottawa, conducts studies for the armed services on the effectiveness of weapons, weapons systems, military tactics, training and administrative operations. The scientists advise and assist in Canada's air defence plans on a continuing basis. They actually live with the Services both in training and during operations. By presenting to the various commanders all the scientific and related information available concerning varying situations, the best possible decisions are facilitated.

* * *

At the Defence Research Medical Laboratories (D.R.M.L.), at Downsview, just north of Toronto, investi-

gations concern the problems of Service personnel as they relate to environment and tasks, rather than to the cure or alleviation of illness. The establishment's primary aim is to investigate factors likely to help or hinder the military man's ability to perform his duties effectively.

Scientific research includes the human factors in selection and training as applied to future operations, improvement of tasks relative to human capacities, and the development of special ration items. Of increasing importance is the search for increased protection against environmental difficulties and military hazards. The latter involve conditions stemming from high altitudes, noise, climatic variations, and chemical warfare. Parallel studies are leading to a greater understanding of the physiological reactions to these problems.

D.R.M.L. scientists are acknowledged as being among the world's leaders in the field of motion-sickness research. To assist in investigations in this field, one scientist has developed power-swings, turntables, and other similar apparatus, to evaluate the susceptibility of subjects to motion-sickness. Prospective members of R.C.A.F. aircrew act as subjects on such devices. The tests indicate those individuals who are most susceptible to motion-sickness and for whom useful employment elsewhere in the R.C.A.F. can be found.

D.R.M.L. scientists work closely with their opposite numbers at the R.C.A.F. Institute of Aviation Medicine. One wing of the large Downsview establishment has been placed at the disposal of the R.C.A.F., whose personnel conduct experiments and evaluations on survival rations and kits and other similar aids. Among the research facilities at D.R.M.L. used frequently by the R.C.A.F. is a decompression chamber which can simulate altitudes up to 100,000 feet. Individuals and groups of personnel act as subjects

for high-altitude jet-flight studies at varying altitudes under changing atmospheric conditions. The data obtained is proving increasingly useful to the R.C.A.F.

* * *

Another establishment in the D.R.B. chain is the Defence Research Northern Laboratory (D.R.N.L.), at Fort Churchill, Manitoba. Its projects include studies on the physiological response of man to cold, northern rations investigations and trials, the interpretation of ground conditions from air photographs, entomological research aimed at providing protection from biting flies, and studies on the behaviour of petroleum products at low temperatures.

Other activities relating directly to Service problems concern load studies as applied to individual troops on northern operations, ground navigation improvements, and survival studies relating to the various aspects of northern operations. The programme is heaviest during the winter months, with survival and operations trials predominating. Scientists and Service personnel alike work on behalf of Canadian, U.K., and U.S.A. requirements. As the more basic problems have received attention, emphasis on the Board's northern research has shifted gradually over the years toward the physical sciences and operational research.

In addition to maintaining long-term projects, D.R.N.L. serves as a base for visiting scientific teams from the U.K. and the U.S.A., as well as for various other Canadian government agencies and universities. The assistance extended to test teams from other countries—particularly to those from U.S. Army Corps with active research programmes involving the north—has been extensive during the past eight years. Also among past activities have been cosmic-ray investigations, the results of which are expected to assist materially during



Mr. A. H. Zimmerman, chairman of D.R.B.

the rocket firings planned to take place at Fort Churchill in 1957 by scientists participating in the International Geophysical Year. During the winter of 1955, assistance was given to U.S. Army personnel during guided-missile firings carried out to test performance at low temperatures.

Several summers ago, a D.R.N.L. party spent ten days on the tundra with little or no rations. The objective was a survey of edible vegetation for humans isolated in the north and without food.

* * *

Suffield Experimental Station (S.E.S.), near Medicine Hat, Alta., is employed for experimental activi-



ties related to the defensive aspects of biological, chemical, and radiological warfare. The Board's largest establishment, S.E.S. occupies an area of 1,000 square miles. The staff works closely with the Canadian armed forces and scientific and Service colleagues from the U.K. and the U.S.A. Because of its Service association, the establishment includes Army and R.C.A.F. detachments whose activities are integrated closely with the station programme. Apart from extensive and recently completed entomological activities, most of the work at S.E.S. is classified. The scientists and engineers have developed aircraft spraying-devices used widely for pest control in the grain-fields of the west and in the evergreen forests of eastern Canada. Features of the developments are lightness and compactness, properties which permit aircraft to carry unusually heavy payloads of insecticides.

Established in 1941 as a joint British-Canadian field trials area for chemical and biological warfare research, S.E.S. was eventually taken over completely by Canada. At one period during the war, it was the only major field-trials establishment serving the free world.

* * *

In addition to its research establishments in Canada, the Board maintains offices in London and

Washington, where Defence Research members serve on the Canadian Joint Staffs. Primary aims of the members are to ensure a continual flow of information between Canada and the countries concerned. Their staffs include both liaison officers and specialists.

Headquarters of D.R.B. are located in Ottawa at National Defence Headquarters. Presiding over the Board's activities is the Chairman, Mr. A. H. Zimmerman, who holds the rank of a deputy minister and is a member of the Chiefs of Staff Committee. His equal status, as a scientist, with the Chiefs of Staff is believed to be unique in the world today.

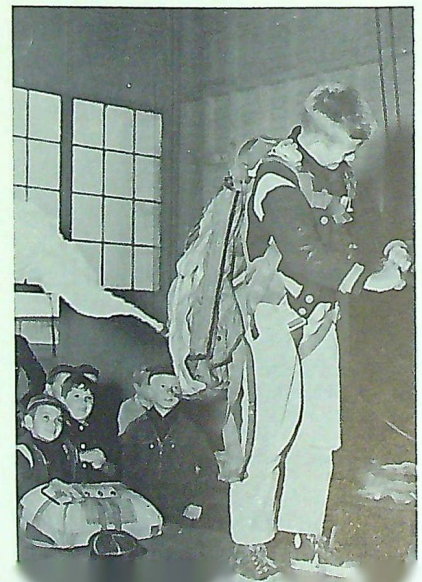
Guiding the activities of the staff are members of the Defence Research Board who hold office by virtue of their positions and by appointment. The *ex-officio* members of the Board, in addition to the permanent Chairman and Vice-Chairman, are the Deputy Minister of National Defence, the three Chiefs of Staff, the President of the National Research Council, and a representative of the Department of Defence Production. Appointed members include prominent representatives of universities and Canadian industry. All have special knowledge and experience which is of particular value to defence research activities in Canada.

CUBS AT AYLMEYR



OUR photograph shows a member of the Tillsonburg Wolf Cub Pack 3B pulling the rip-cord of an instructional parachute in the Safety Equipment School at R.C.A.F. Station Aylmer, Ontario. Accompanied by their four supervisors, the Cubs also visited the Aircraft Refinishing School, the Recreational Specialists' School, and the Aeronau-

tical Officers' Engineering School. They watched a display of safety equipment pyrotechnics and had their fingerprints taken; they listened to the run-up of an instructional *Sabre* jet. Several of the young visitors gravely enquired if they could not join the R.C.A.F. immediately.

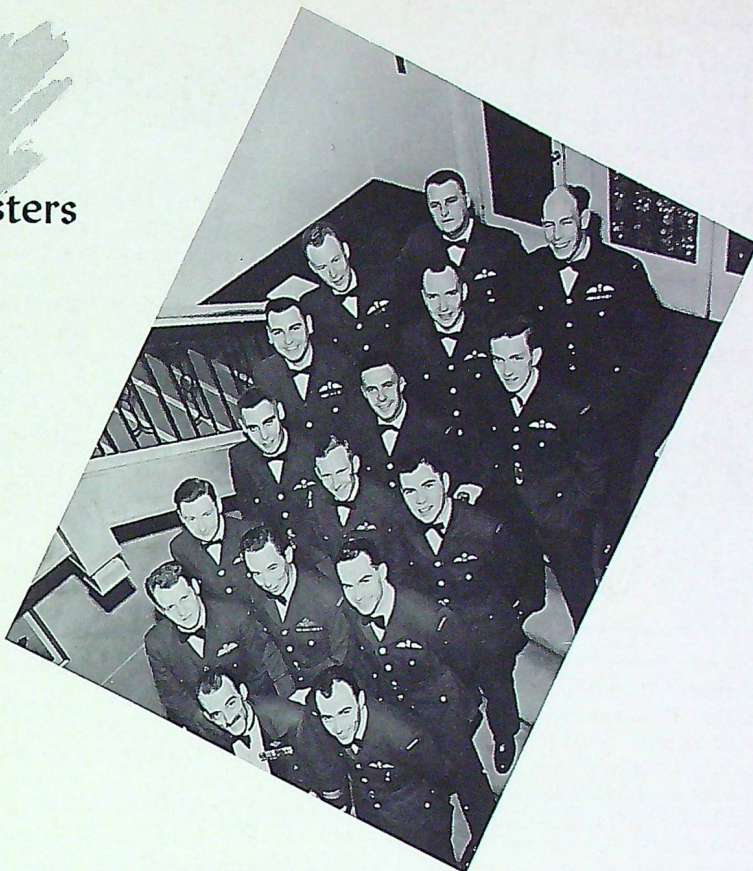


Auxiliary Mach-Busters

Membership pins and certificates in the Mach-Busters' Club were awarded to 20 pilots of Toronto's No. 411 (Fighter) Squadron (Aux.) for flying *Sabre* jets faster than the speed of sound.

Formed two years ago by Canadair Ltd., the Mach-Busters' Club now has 1100 members, and new members are being enrolled at the rate of about 500 per year. Miss Jacqueline Cochrane, the American aviatrix, is the only female member of the club.

Pins and certificates were awarded by Hedley Everard, Canadair's assistant chief test-pilot and a founder of the club, at a Mess Dinner at R.C.A.F. Station Toronto.



Left row (front to back): Flying Officer F. W. Kidd, Flight Lieutenant R. J. Richardson, Flying Officer A. R. Hollinsworth, Flt. Lt. H. B. Davis, and Flying Officer G. Seymour. Centre row (front to back): Squadron Leader A. A. Sherlock (O. C. Support Unit: Regular), Flying Officers E. K. Prentice, T. H. Ussher, A. P. Dorning, J. O. Richardson, G. W. Smola (Support Unit: Regular). Right row (front to back): Flt. Lts. J. O. Lumsden, F. J. Mills, Flying Officers G. K. Mansell, W. H. Johnston, Flt. Lt. R. M. Legge.

MANY MIGLIA



The adherence of aircraft makers and operators to British imperial measures and their United States offspring is a tragedy of the first magnitude. It is a sign of addle-headedness. It is a refusal to be guided by reason. We repeat, therefore, that the use of these measures is a tragedy. But tragedies have their funny side and perhaps we may be permitted here to refer to it.

In aviation today most western countries are using units which include the nautical mile and its derivative, the knot. At unpredictable

moments the nautical mile is varied by the use of the statute mile. If anyone in aviation uses the word "mile", therefore, he may be referring to any one of the following units:

The British statute mile, which is 1,760 imperial yards.

The United States mile, which is 5,280 United States feet.

The geographical mile, which is 1 minute of latitude on the Greenwich meridian. It ranges from 6,000 to 6,100 British imperial feet.

The British nautical mile, which

is 6,080 British imperial feet.
The United States nautical mile, which is 6,080.2 U. S. feet.

The French nautical mile, which is 1,852 metres.

The international nautical mile, which is 6,076.1 feet.

The Roman mile, which is 1,618 yards.

The R.A.F. radar mile, which is 2,000 British imperial yards.

The Swedish mile—10,936 yards,
The Irish mile—2,240 yards.

(*"Aeronautics": U.K.*)

Letters to the Editor

TYPING RECORD

Dear Sir:

In your October "What's the Score?" you state that the world's record for typing is "159 words per minute, maintained for one hour without error (in 1918)." The "Business Education World" lists 170 words per minute without error, typed by Margaret B. Owen on 21 October 1918. Which is right?

R. E. Meyer (R.C.A.F.A.)

(Our authority was the manager of a well-known firm of business machine manufacturers—but he is not necessarily infallible. Mr. Meyer's authority, however, apparently makes no mention of the period over which Miss Owen maintained her speed.—Editor.)

BACK ISSUES WANTED

Dear Sir:

I am with No. 330 Squadron of the Air Cadets and I need two copies of "The Roundel" to complete my file. The issues I lack are those for January 1950 and February 1951. Can you please supply them?

A. Poirier,
83 Dessureau St.,
Cap-de-la-Madeleine,
P. Quebec.

(We are completely out of stock of the above issues. Perhaps some other reader who has spare copies will drop a card to Mr. Poirier to let him know of their availability.—Editor.)

Dear Sir:

I was fortunate enough to serve as a pilot with No. 401 Fighter Squadron for more than a year and half in the last war after having served for two months with No. 402. I believe that histories of both squadrons have appeared in "The Roundel". Is it possible to obtain a copy of each?

A. E. Gray,
83 Lennox, Ave.,
St. Vital, Man.

(The history of No. 401 appeared in June 1950, that of No. 402 in March 1950. Our stocks of both issues are exhausted. We must therefore refer Mr. Gray's request, like Mr. Poirier's, to our readers.—Editor.)

ADDRESSES SOUGHT

Dear Sir:

I would be grateful if you could supply me with the present addresses of two old friends who served with me in No. 130 (F.) Squadron in Eastern Air Command (1942-43). Their names are J. L. Sabourin (R120014) and R. Benoit (R55901). Both were Flying Officers.

J. M. Taillefer (R.C.A.F.A.)
528 5th St.
Port Alfred, P.Q.

SPICKING OF SCRAPES . . .

(The C. O. of one of our stations has written to us enclosing a certified true copy of a letter recently received by him from a nearby village.—Editor.)

Mr. . . .
R.A.F. Station

I hurd latley dhede the airforce sketing round is supase to be cancelled and all dhase scrapes is to be dump it is y im Wrigting to you to see if i will have a chence to have dhase scrapes to make a sketing round to . . . Village.

I Whase spicking these morning to our dadee about building a sketing Round an he edvise me to Wright to you to see if i

have a chence to have dhase scrapes, and I spack to F/S . . . latlay about Whate he do Wish all dhase scrapes and he tole me dhese is supase to be dump.

Well Sir i Will be very glade if dhase scrapes is to be dump to have dhem to help our . . . padre of . . .

Your very truly . . .

SINS OF OMISSION

Dear Sir:

That wonderful article last November on "Victor Charlie 10,000" yet not a word to the effect that Canadair built the aircraft of which the Prime Minister said "There isn't another plane in the world like ours"!

To add insult to injury, in the same issue you describe the *Whispering Giant* as being made by Bristol, although its maritime reconnaissance version, the CL-28, is merely referred to as "being built in Montreal."

Those two items will cost you at least two drinks next time I catch you.

Leslie C. Powell,
Public Information Manager,
Canadair, Ltd.

(We stand justly chastised by our old friend Mr. Powell and shall without fail make "amende honorable" at our next meeting.—Editor.)

VALEDICTORY



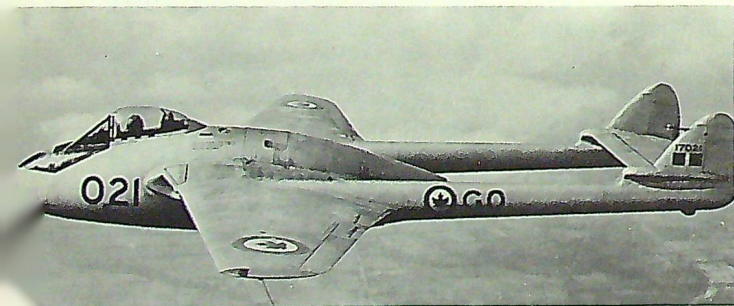
The *Mustang* and the *Vampire* have been officially retired from the R.C.A.F. One aircraft of each type has been flown to Lethbridge, Alberta, for storage, and the remaining 87 *Mustangs* and 28 *Vampires* have been declared surplus and handed over to Crown Assets Disposal Corporation.

The *Mustang*, with a top speed of something less than 400 m.p.h. and a service ceiling of 35,000 feet, was

developed for the R.A.F. in 1940 by North American Aviation in the U.S.A. and was used as a long-range fighter escort for daylight bombers. The De Havilland *Vampire*, which first flew in 1943, came into service with the R.C.A.F. in 1948. Its top speed was 530 m.p.h., its service ceiling 45,000. It was, in the opinion of many pilots, the most manoeuvrable and graceful jet aircraft ever designed.

Vampire.

Mustang.



THE R.C.A.F. BENEVOLENT FUND

The Royal Canadian Air Force Benevolent Fund was established in order to assist serving and former members of the R.C.A.F. and their dependents in time of financial distress.

SERVING PERSONNEL can obtain full information from their units' Orderly Rooms.
FORMER MEMBERS can obtain it from:

- The local Benevolent Fund Committee.*
- Any Wing of the R.C.A.F. Association.
- Any District Office of D.V.A.
- Royal Canadian Air Force Benevolent Fund (Inc.), 424 Metcalfe St., Ottawa, Ont.

*This address is obtainable from any of the other three sources.

